JOURNAL

OF THE

UNITED STATES CAVALRY ASSOCIATION.

VOL. VIII.

DECEMBER, 1895.

NO. 31.

GENERAL HENRY LEAVENWORTH.

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IT is a striking evidence of the rapid march of events—rather than years—in the United States, that an officer of the army, who died but little more than sixty years ago, after a career of unusual achievement, should have been so absolutely forgotten that the mention of his name calls to mind a military post, itself so long established as to have a history and traditions of its own, but gives no suggestion of the life history of the distinguished soldier whose name it bears. Not only is this the fact, but I have been unable to find, after considerable inquiry, that there is a single officer now living who knew General Leavenworth, or who even remembers him as an officer of prominence in the army at the time of his entry into the military service.

Uncivilized races, more tenacious than ourselves of the memory of their great men, hand down from generation to generation the names and deeds of those whose endeavors in behalf of their fellows have been deemed worthy of remembrance. It shall be my purpose, therefore, within the narrow limits of this paper, to attempt a similar service in behalf of an officer who, in his day, contributed not a little to fix the character and determine the traditions of the

army, and whose career is well worth a more extensive and elaborate study.

General Henry Leavenworth was born in Connecticut in 1783—the year of the treaty of Paris. While still a lad he removed to Vermont and, before the fate of the disputed territory had been settled, again moved to Delaware county, New York, where he grew to manhood, and acquired such education as was possible in a new and unsettled country just emerging from a long and exhausting war, and as yet unprovided with the most elementary institutions of learning. But little is known of the circumstances of his boyhood and youth. His choice of the law as a profession gives some indication, not only of the bent of his mind, but of his thoroughness and steadfastness of purpose, and of a desire for solid attainment which could have been satisfied in no other way, in the new and undeveloped country in which his youth and early manhood were passed.

Immediately after being called to the bar he formed a law partnership with his preceptor, General Root, and entered upon the general practice of his profession at Delhi, in Delaware county. At the outbreak of the second war with England, he had not only built up what was regarded, at the time, as an extensive and successful practice, but had acquired such consideration in the community as to be selected to command the company of infantry that was raised for the war in Delaware county, in the winter of 1812 and 1813.

Captain Leavenworth's company was assigned to the Ninth Regiment of Infantry and attached to the brigade commanded by General Winfield Scott. He took an active part in the campaign of 1813 in northern New York, and was promoted to the grade of major in time to participate, as a regimental commander, in the invasion of Canada from the Niagara frontier. He was engaged in the battles of Chippewa and Lundy's Lane, and greatly distinguished himself on both occasions—so greatly, indeed, as to have received the brevets of lieutenant-colonel and colonel in the army for gallantry and good conduct as a regimental commander.

At the close of the war Colonel Leavenworth obtained leave of absence and served for a time as a member of the Legislature of New York. At the first reduction of the army he was assigned to the Second Infantry as a major and stationed at Sackett's Harbor. In 1818 he was promoted lieutenant-colonel of the Fifth Infantry, which he joined at Detroit and conducted to the Falls of St. Anthony, where he established a military post at the site of the present Fort Snelling. On the reduction of 1821 he was transferred to the Sixth

Infantry—under the circumstances almost the equivalent of a promotion—and assigned to the command of the troops stationed at the Council Bluffs, on the St. Peter's River, in Iowa. From this point during the summer of 1823 he conducted an expedition against a band of hostile Arickaree Indians, who, in an engagement lasting from August 9th to 13th, were so severely handled as to be willing to make an enduring treaty of peace. For these services Colonel Leavenworth was specially mentioned by General Gaines in his report as the commander of the Western Department; his action was also commended by Secretary Calhoun, and by President Monroe in his annual message.

We now approach a period in his career which makes the selection of Fort Leavenworth as a home for the Infantry and Cavalry School one of peculiar fitness and significance. On March 4, 1826, the Commanding General of the Western Department, in conjunction with General ATKINSON, was directed to select a point on the west bank of the Mississippi River within twenty miles of its confluence with the Missouri, which, in their judgment, was best suited for the establishment of an infantry school of instruction. The place selected was the site of the present Jefferson Barracks, and here Colonel LEAVENWORTH, who, in 1825, had been promoted to the colonelcy of the Third Infantry, set up the first American school for practice for infantry. Colonel Leavenworth, who, on his promotion in 1825, had joined his new command at Green Bay, in Wisconsin, conducted a detachment of his regiment to St. Louis and addressed himself to the task of building a post and a school at the same time. The school was not destined to be long lived, and when it died, partly from inanition and partly from want of official encouragement and support, it was not destined to have a successor for more than fifty years. It will be profitable to pause for a moment over this early experiment in military education.

From an examination of such meager references to the establishment as can be found in the letter and order books of the period, it is apparent that the school was neither begun nor maintained upon a scale of wasteful extravagance. After some correspondence with the Department, Colonel Leavenworth was informed, under date of April 21, 1827, that each company of his regiment was to be provided with a copy of "L'Allemand's Artillery." It is probable that the companies stationed at the school were also supplied with copies of "Scott's Tactics" and the General Regulations of the Army, and that some sort of instruction in drill and regulations was carried on, but not for long, as the letter announcing the shipment of

the text books in Artillery bears date April 21st, nearly a month subsequent to the date of the order transferring the garrison of Jefferson Barracks to the Upper Missouri. And so passed, after a life so short as to have deprived the undertaking of anything like an epochmaking character, the first attempt to set on foot a school for the practical instruction of officers, not only in the United States, but,

in all probability, upon the Western Continent as well.

The orders of the day for March 7, 1827, directed Colonel LEAVENWORTH, with four companies of his regiment, to ascend the Missouri River and, upon reaching a point on its left bank, near the mouth of the Little Platte, to select such a point within a range of twenty miles below its confluence as, in his judgment was best calculated for the site of a permanent cantonment. The geography of the department was less good than the judgment of Colonel Leavenworth for, after a reasonable search he wrote the Department, under date of May 8th, that he had made the location on the right bank of the river, and had commenced the erection of a cantonment there in accordance with his orders. Platte enters the Missouri from a narrow valley about ten miles cast of Fort Leavenworth. Its neighborhood presents no special advantages as the site of a military post, and contains but two towns of considerable size, one, Weston, noted as a center of pro-slavery operations during the Free Soil disturbances in Kansas between 1855 and 1860; the other, Platte City, became famous as a vantage ground for the operations of Jayhawkers during the period of the Civil War. Indeed, the east bank of the Missouri was wisely abandoned at an early stage of the search, as it was found to be subject to overflow, and otherwise less eligible than the commanding situation on the right bank of the river, where Cantonment Leavenworth was finally established. This was in April, 1827, and the post with which the army has been more closely identified than any other stands upon the site chosen for it by its distinguished founder nearly seventy years ago.*

On the 19th of September, 1827, the commanding general of the Western Department was informed that the site selected by Colonel LEAVENWORTH for a permanent cantonment on the "right" instead of the "left" bank of the Missouri was deemed to be judicious, and was therefore approved. The post was definitely designated "Cantonment Leavenworth," in accordance with orders from the Adju-

^{*}The post returns do not show what troops had occupied the post prior to August, 1827; but at this date its garrison consisted of Companies "B," "D," "E" and "H," Third Infantry, under the command of Captain W. G. BELKNAP, of same regiment, the father of a recent Secretary of War.

tant-General's Office, dated November 8, 1827. At first the post was found very unhealthy, a large number of the command being prostrated by malarial fevers, which, in many cases, were fatal.

A little less than two years later, on May 26, 1829, the garrison of Cantonment Leavenworth was withdrawn to Jefferson Barracks, and it is not easy to fix, with precision, the date of its return. It was again established at some time prior to August of the same year, as a return bearing date August 12, 1829, gives the composition and strength of the garrison, which consisted, at that date, of detachments from Companies "A," "B," "F," "H" and "I," of the Sixth Infantry, numbering fifty-six men, under the command of Captain Zalmon C. Palmer, of same regiment. The Secretary having directed that all cantonments should be called forts, the designation of the post was changed to Fort Leavenworth by Orders No. 11, of the Adjutant-General's Office, bearing date February 8, 1832.*

In February, 1834, Colonel Leavenworth was assigned to the command of the Southwestern frontier, and in that capacity conducted a campaign against the Pawnee Indians. These operations were carried on with such skill and address that one of the most formidable tribes in the Southwest was not only subjugated, but induced to enter into permanent treaty regulation with the United States, without a single hostile collision. On July 25, 1834, Colonel LEAVENWORTH was brevetted a brigadier general, having on that day completed ten years of faithful service in the grade of brevet colonel in the army. On July 21st, four days before his well deserved promotion, and while still engaged in the prosecution of operations against the Southwestern Indians, General Leavenworth died, after a brief illness, at the Cross Timbers, near the mouth of the False Washita River, in the Indian Territory. His remains were interred at Delhi, N. Y., in May of the following year. The resolutions passed by the officers of his regiment, which, in great part, constituted the expedition which the General was conducting at the instant of his untimely death, evince profound sorrow, and convey a deep sense of personal loss at the passing of an officer who was far more to them than a mere regimental commander. It will serve to mark the interval of time which has passed to say that one of the junior signers of the resolutions, Lieutenant George Wright, was lost at sea thirty years later, he being then the senior colonel in

[°]I am indebted for a number of important facts in relation to the establishment of Fort Leavenworth and its early history to the thoughtful and painstaking endeavors of Major George W. Davis, Eleventh Infantry, now the President of the War Records Commission in Washington.

the army, and en route to assume command of the Department of the Columbia, the territorial limits of which it would have been impossible to define, so little was known of that region at the date of General Leavenworth's death in 1834.

The general esteem in which he was held in the army is shown by the following extract from a short notice of his life and services, which appeared in the *Military and Naval Magazine of the United States* for October, 1834:

"General Leavenworth's reputation belongs to the country, and he has left her a rich legacy. He was not a mere soldier. Viewing the various questions which came before him in their true elements and just relations, he was no less clear in judgment than energetic in action. He never shrank from a responsibility which his situation devolved upon him, but, with the delicacy and difficulty of the task, seemed to rise the irrepressible energies of his spirit. He escaped, too, the great danger of men accustomed always to command, and knew how to care for the rights and feelings of others. To no better hands could have been confided the sometimes conflicting interests of a regiment, for he entered into the feelings of all and, a thorough soldier himself, knew how to interpose and reconcile all. He always commanded his regiment, and they who composed it learned to appreciate, in the order and harmony which prevailed, an efficient head."

General Leavenworth seems to have exercised a profound influence upon the development of the standards of duty and discipline in the army of the United States during its formative period, between the reduction of 1821 and the occupation of the valley of the Lower Missouri, which was completed in 1845. He was one of the first, as he was certainly one of the most active and intelligent of the small number of regimental commanders upon whom devolved the duty of adapting European methods of drill, discipline and administration to the peculiar needs of our own military service. How well this task was performed was seen, a little more than ten years later, in the splendid behavior of the regular regiments in the war with Mexico. He was a man of broad and varied culture, keenly alive to the needs of the time, and fully impressed with a sense of the importance of the part which the army was to play in the development of the great empire beyond the Mississippi, which had but recently been acquired, and the very boundaries of which, to say nothing of its vast resources and possibilities, were then practically unknown. That the settlement of the valleys of the upper courses of the Mississippi and Missouri Rivers, comprising the States of Missouri, Kansas, Iowa, Minnesota, Nebraska and the two Dakotas was effected peacefully and without serious friction, is due largely to

his foresight in preventing hostile collision, and to his rare tact and skill in dealing with the tribes whose territories were being encroached upon by the advancing settlements. And it was while engaged upon the execution of a similar scheme of pacification, with reference to the tribes occupying the plain region of the Trans-Missouri—a duty of the highest importance, which had been entrusted to him as the one best fitted, by character and capacity, for its adequate performance—that death put a term to his useful and productive labors.

SOME CAVALRY LESSONS FROM THE CIVIL WAR.

BY SECOND LIEUTENANT J. P. RYAN, THIRD CAVALRY,

WHILE it is not at all probable that the United States will ever again be called upon to fight for its existence in a struggle as stupendous as that which shook our continent from the spring of 1861 to April of 1865, yet the uncertainty of continued peace has frequently been demonstrated, and no nation dare discard the military precautions on which its safety may at any moment depend.

The principles of our government and temperament of our people forbid the maintenance of large standing armies of trained troops in time of peace, and preparation with us cannot be along that line. In a war of any magnitude to which the United States may be a party, our dependence must again be placed on the volunteer soldier, and no better preparation can be made for such an emergency than a careful study and preservation of the lessons taught by the Rebellion, whereby we may avoid the countless errors and mistakes in organizing and handling untrained troops which characterized the early period of that struggle.

The outbreak of the Civil War found the North poorly prepared at all points to accomplish the task before it. Fortunately, men and material were abundant, and the general intelligence of the men who responded to the first call for volunteers enabled them readily to assume the duties of infantry and artillery soldiers, and the spring of the following year found magnificent bodies of these arms in the field. This cannot, however, be said of the cavalry, and the failure of those in authority to recognize the necessity and true functions of this arm, resulted in a loss of its valuable services for almost two years. Good cavalry cannot be made by order, and it is here more than in any other arm that the experiences of the late war can with benefit be treasured as a guide for the future.

Probably the first and most important cavalry lesson taught by

our war was the necessity of a large body of mounted troops to a vigorous and successful prosecution of military operations. It was originally proposed to confine the cavalry of the Federal army to the regular establishment of six regiments, and this decision seemed justified at the time by many and good reasons. General Scott had announced the opinion that owing to the wooded and broken character of the field of operations and the improvements in rifle firearms, the role of the cavalry in the approaching contest would be of an unimportant and secondary nature. Again, it would require at least one year of training to produce an efficient mounted soldier, and it was confidently expected that the rebellion would be suppressed within that period. Another reason urged against the creation of a large mounted force was the question of expense. Cavalry is a very expensive arm, and later statistics show that it cost \$300,000 to provide the equipments for a single regiment.

The first battle of Bull Run proved a conclusive argument against these reasons. The eyes of the North were opened to the magnitude of the struggle before them. The operations of the Black Horse Cavalry of Virginia made it evident that only cavalry could successfully oppose them. All questions of expense were thereupon disregarded, and Congress authorized the President to accept the services of volunteer cavalry. Now, as to the manner in which this force was to be organized and prepared for the field, we find the Congressional enactment above referred to (August 4, 1861), provided, among other things, that "each company officer, non-commissioned officer, private, musician, and artificer of cavalry shall furnish his own horse and horse equipments." This was in accord with the orders issued by the War Department on the 4th day of March preceding, for the organization of the single regiment of cavalry called for by the President.

But the Congressional enactments went further, and added a second proviso, that "such of the companies of cavalry as may require it may be furnished with horses and horse equipments in the same manner as in the United States army."

This second proviso was a saving clause; without it, it is doubtful if the government could ever have maintained an efficient cavalry force. The Confederate States adopted the policy of requiring the troops to provide their own mounts, and although the evils of this system early became apparent, it was blindly persisted in to the end, and was undoubtedly one of the chief causes of the rapid decline of the Southern cavalry in the last two years of the war. The method proposed, of keeping himself supplied with a serviceable horse in

consideration of a per diem compensation of forty cents, seems never to have found favor with the Northern trooper; and the Third Indiana and First Iowa, and possibly a few other regiments, were the only ones which availed themselves of the offer for the entire period of the war.

While the evils of this system unquestionably condemned it as a means of keeping the cavalry mounted, yet in the event of another war it seems that it might with advantage be resorted to in first placing the troops in the field. The difficulty of obtaining a sufficient number of horses to mount the newly organized regiments at the outbreak of the war, resulted in many regiments taking the field without any mounted training, while others actually served more than a year as foot troops while awaiting a supply of horses. The government could purchase at a fair valuation and after inspection, the horses offered by the volunteer, and this would give the Quartermaster's Department sufficient time to establish its regular purchasing depots by which the troops are to be remounted.

To a better understanding of some of the causes which contributed to the inferiority of the Northern cavalrymen in the first year of the war, we must look to the manner in which they were enlisted and trained. Under the Congressional authority to enlist volunteers, the Secretary of War granted permission to influential men throughout the country to organize cavalry regiments. Recruiting stations were opened in various parts of the States, and applicants were enrolled until the complement of the company was obtained.

The company then appeared before an officer of the regular army and after an inspection of men for physical fitness was duly mustered into the service of the United States. The new organization then repaired to the regimental rendezvous, where it was supposed to receive a course of military training.

In the execution of the details of this apparently simple and satisfactory scheme, we find that men were enlisted without regard to size, weight, knowledge of horses or riding, and many of them were entirely unsuited to mounted service, and never became even passable cavalrymen. As the greater part of the work of the cavalry in future wars will be detached service, scouting, reconnaissance, etc., individual horsemanship and skill in the use of arms will be more important than ever before, and men should not be enlisted who show marked unfitness for mounted service. Of course, even with the greatest care in selection and subsequent training, some

men will turn out very poor riders, and provision should be made for the transfer of such men to other arms of service.

The training which the regiments were to receive at the rendezvous very often amounted to nothing; no proper drill masters were provided, and the troops loitered around in idleness and discontent for months, awaiting the arrival of horses and equipments, which, in numerous instances, never came. In the history of the Tenth New York Cavalry, it appears that the officers employed a retired Prussian officer to drill the regiment. Further, we read: "Had the regiment been under the command and instruction of a regular army officer from the beginning, it would have been a great advantage." Again, in the history of the First Rhode Island Cavalry, we read: "Invaluable to us at this time would have been such a volume, giving the structure, duties, drills and field experiences of a regiment of horse."

In the history of the Fourth Iowa Cavalry the efforts of the newly appointed officers to drill the troops is referred to as "the blind leading the blind." This state of affairs existed very generally throughout the country, and the condition in which cavalry regiments frequently took the field is graphically set forth by Captain VANDERBILT, of the Tenth New York Cavalry, in describing the first service of his company on escort duty. He says: "Please remember that my company had been mustered into the service only about six weeks before, and had received horses less than a month prior to this march. * * Some of the boys had a pile in front of their saddles, and one in rear so high and heavy that it took two men to saddle one horse, and two men to help the fellow As soon as I could get my breath into his place. I shouted 'Gallop, march!' and away we went over the hard frozen ground toward Fredericksburg. In less than ten minutes Tenth New York men might have been seen on every hill for two miles rearward."

After reading many accounts of a similar nature to Captain VanderBilt's, it is not difficult to understand why entire squadrons sometimes surrendered to the enemy from sheer helplessness in the early years of the war, and why the cavalrymen inspired more ridicule than awe.

In support of this practice of pushing raw levies to the front without previous training, it has been argued that there is no better training school than the camp and battlefield, yet it is equally true that much will be gained by a careful selection of men and a little preliminary instruction properly directed. It was by enlisting only

men accustomed to riding and the care of horses that the Confederate cavalry was enabled to attain its high state of efficiency in a very short time.

ARMS AND EQUIPMENT.

The experience of our cavalry confirmed the value of the carbine, saber and pistol, and these weapons continue to be the armament of our regular cavalry troops. A large proportion of the European cavalry is armed with the lance instead of the saber, and there are many arguments in favor of it as a charging weapon. The lance was issued to and carried by the Sixth Pennsylvania Cavalry (Rush's Lancers) from the time it took the field, December, 1861, until its return from Stoneman's raid in May, 1863, when it was discarded as unsuited to service. It is unfortunate that no opportunity was offered this regiment to use the lance in the charge, as the men placed great confidence in the weapon, and results with it would have been valuable in reaching a determination as to its relative merit.

There has been much controversy over the comparative value of the pistol and saber in the charge, but the testimony of the war seems strongly in favor of the saber, and it is repeatedly recorded by many of the participants that the pistol never drove the saber. The pistol was the favorite weapon of the Confederate cavalry in the earlier part of the war, but it is a significant fact that the cavalry combat on the right flank at Gettysburg was fought with the saber almost entirely, and these were the same troops that fought at Brandy Station, Aldie, and Upperville, and must have known the most effective weapon.

The saber would be a much more formidable weapon if ground to a cutting edge, and there seems no good reason why it should not be. The practice of sharpening the sabers was frequently resorted to during the war, and at one time was the occasion of a complaint by the Confederates that our troops were violating the rules of war. The result of the rebel protest was a general order in the Army of the Cumberland authorizing the use of sharpened sabers.

Many defects in the cavalry equipment which became apparent during the hard service and rough usage of the war have since been remedied. The McClellan saddle, issued then with only a rawhide covering, caused great discomfort to the rider after it had been rain soaked, and the stitching giving way exposed edges of the hide, which became harsh and stiff and cut like a knife. This has since been corrected by the use of a leather cover over the rawhide, and the McClellan saddle as used to-day is probably the best

military saddle in use in the world. The saddlebags, small leather pockets scarcely large enough to carry a pair of horseshoes, were invariably thrown away to make room for a canvas bag, sack, or other contrivance better suited to carrying the innumerable small articles that form part of the equipment. The present saddlebags are a vast improvement over the old ones, and would probably prove satisfactory in active service.

A grain sack should be provided in which to carry the three days' forage which every cavalry command found it necessary to take when operating independently and away from the trains. Without the sack, the trooper usually solved the difficulty by spreading the grain in the shelter half and rolling it into a cylindrical bundle, which he strapped behind the cantle. This method distributed the weight, and bundle could be made symmetrically smaller as contents were used.

The picket rope and pin, so necessary and useful in the service of our regular cavalry on the Western plains, loses its function when large bodies of cavalry are operating together, and being an added weight and incumbrance, it was almost invariably thrown away at the beginning of a campaign.

It would favor the secrecy so necessary in operations of scouting, reconnaissance, etc., to substitute a hard leather scabbard for the saber in place of the noisy and conspicuous metal one now in use.

OFFICERS.

Much of the inefficiency of our cavalry in the early part of the war may be attributed to the lack of military education and general unfitness of the officers, and this in turn may be explained by the method of selection. Until 1863 the company officers were elected by the privates and appointed by the State government upon the recommendation of the colonel. The field officers were elected by the company officers.

This system of selection was eminently vicious; it was the cause of much jealousy and ill-feeling, with the attendant evil results on discipline, and the class of officers furnished by it was decidedly inferior. Popularity with the enlisted men was often in inverse proportion to education, correct military ideas and other qualities which serve to make a good officer. The policy of promotion from the ranks for bravery and merit was adopted in our service in 1863 and continued to the end of the war. The change met with much opposition from the enlisted men, who were jealous of their supposed right of selection, but its beneficial effects were soon apparent

in securing better officers, and moreover, the hope of promotion proved an incentive to better conduct on the part of the men.

The course of military instruction, which is now a feature of many of our most prominent educational institutions, will place a large number of intelligent and well educated men at the disposal of the government, who, in view of their previous training, will only need a little experience to make them good officers; and these are the men that should be appointed.

MAINTENANCE OF TROOPS IN THE FIELD.

Having organized the troops into regiments and sent them to the front, provision must be made to continue their efficiency by filling up the ranks as they become depleted from losses in men and horses. This leads to a consideration of the methods of recruitment and providing remounts. There are two general systems of recruiting an army that have been resorted to in time of war: 1st. By organizing new regiments; and, 2d, By replacing losses in old regiments by recruits sent from regimental depots.

The first method was the one adopted by our government during the war, and resulted in doing incalculable harm to our armies. The well trained and disciplined regiments became inefficient from numerical weakness, often being reduced to less than 300 men, while the new regiments, from lack of training, experience or proper officers to lead them, were almost useless.

Another objectionable feature of this system was that newly appointed officers were often, by seniority of rank, placed in responsible positions, and in command of older officers of far greater knowledge and experience, and this naturally caused discontent and bitterness of feeling, and often led to a lack of earnest and mutual support.

The evils of this system were such as to condemn it for all time. It did not possess a single redeeming feature, and its use in our service can only be explained on the ground that it favored recruitment by providing commissions for many new officers, and to secure these appointments private individuals made strenuous efforts to organize companies. This reason had greater weight toward the end of the war, when men were not so readily obtained as in the earlier period.

The advantages of the second method are that by sending the recruit to the old regiment he falls under the care of experienced officers, and is thrown among old and disciplined soldiers from whom he readily learns many of the duties that help to make him an efficient soldier.

Almost all European armies organize their regiments with four or more squadrons, one of which is retained at the depot. This squadron is kept at maximum strength by constant recruitments, and after a period of training, men are sent to the front as they are needed by the regiment. There is no reason why this method should not be attended with good results in recruiting for our large volunteer armies, and it is almost safe to say that in a future emergency it would be adopted.

REMOUNTS.

The efficiency of a cavalry regiment on active service depends as much on a continuous supply of horses as on men, and the records of our war show that the question of remounts was a most difficult problem to solve.

In all wars of any magnitude, the losses of horses by death, from wounds and disease, capture and abandonment, will be great, even with regular troops; with raw, untrained levies, it will be enormous, and there must be some system by which such losses can be rapidly made good.

During the first two years of the war the Quartermaster-General reports that there were 284,000 horses furnished to the army; and at no time during this period were there more than 60,000 cavalry in the field. These figures are greatly in excess of what might have been legitimately expected from a state of war, and resulted from several causes.

In the baste and excitement of mounting the newly organized regiments little attention was paid to careful selection of horses with respect to their adaptability for cavalry purposes, or even condition, and many horses gave out after short service, while thousands died before reaching the front.

Again, the great majority of our volunteer cavalrymen were totally unacquainted with the subject of proper care and treatment of horses, and this ignorance and indifference was responsible for many epidemics, which a little skill and foresight might have prevented or checked. This is particularly true of the disease known as "scratches," a condition of the horse's heels very similar to chapped hands in the human subject. This trouble was caused usually by exposure to cold, rain and mud, and when it occurred on a long march many horses became too lame to travel, and had to be abandoned. While this disease is difficult to cure, it can always be prevented by keeping the pasterns and heels well greased during inclement weather, and wrapping the legs from the knee down with

strips of blanket or other woolen cloth. In the fall of 1863 an epidemic of scratches raged in the Armies of the Potomac and Northern Virginia, and rendered the cavalry almost useless.

Again, thousands of horses died from overwork and exposure due to constant and excessive picket duty. Many army commanders knew no other use for their cavalry during this time, nor did they know how to properly use it in this service.

The continued and frequent complaint from the Quartermaster-General of the difficulty and great expense of keeping the cavalry mounted, finally convinced the government that vigorous measures must be taken to check the useless and extravagant waste of horseflesh. In July, 1863, the Cavalry Bureau was organized for the purpose, among other things, of providing mounts or remounts. Large horse depots were established at suitable points throughout the country for the collection and training of horses and for the care of sick, wounded and worn-out horses sent to the rear. The efforts of this bureau caused a marked decrease in the loss of horses, but it required the greatest exertions to keep the troops effectively mounted, and it appears that this was not always successfully accomplished. General Sheridan, in his "Memoirs," states that only nineteen hundred horses were furnished the cavalry corps of the Army of the Potomac from April 6th to August 4th, and that this number was not near enough to mount the whole command, and the men who could not be supplied were disposed of in a dismounted camp.

While great destruction of horseflesh will always attend energetic cavalry operations, the proportion of losses in the war could be materially reduced and the government enabled to keep its cavalry force mounted, and this with an increase of efficiency and a saving of millions of dollars, if its experience in this important subject serves to correct abuses and mistakes on future occasions.

If, as has already been suggested, only such men be selected for the cavalry as are accustomed to the care of horses, and if these men be required to furnish their original mounts, the Cavalry Bureau will have ample time to establish its depots for the reception of new horses, and for the care of those rendered temporarily unserviceable by wounds, disease or exhaustion. Officers of known ability should be established at the chief purchasing centers and should make careful personal inspection of all horses proposed for purchase by the Quartermaster's Department, instead of delegating this duty to irresponsible parties whose interests were often advanced by collusion with dishonest horse dealers.

USE OF CAVALRY.

While the Civil War marks the origin and development of many features of modern infantry and artillery tactics, it went much further with the cavalry and practically revolutionized the art of handling mounted troops. Cavalry, which for many centuries had been regarded as an auxiliary arm in the extreme sense of that term, capable only of offensive action, developed in our war an independence of character which enabled it to carry through successfully the great raids which were such an important feature of the operations of the last two years, and in the conduct of which it was often called upon to defend itself against equal or superior numbers of infantry, artillery and cavalry combined—as in the attack on Sheridan's raiding column within the defensive lines of Richmond—or to assail and carry fortified places strongly defended, as instanced by the capture of Selma by Wilson's raiding column in the spring of 1865.

The distinctive feature of the American cavalry, and the one which conferred on it its great power of resistance, was dismounted fire action. This radical departure in the use of cavalry resulted from several causes. The wooded and broken terrain in which most of the operations were conducted often forbade the mounted charge, and our troopers, frequently finding themselves subjected to a fire from infantry behind barricades, naturally did what seemed to them most proper, dismounted to obtain shelter and to make the best use of the firearm with which they were provided. This method of action was the more readily assumed, as our cavalry, without previous history, was not bound by any traditions or false theories as to the limited sphere of the employment of cavalry. This new power of defense and offense was promptly appreciated by the cavalry leaders and grew in use and favor throughout the war, enabling the cavalry to perform duties of such a varied and diverse nature as to almost justify KILPATRICK's remark, "that cavalry could fight anywhere but at sea."

The service of the Federal cavalry divides itself naturally into two periods. The first, extending from the outbreak of the war to the spring of 1863, may be called the period of inefficiency and misuse; the second period, embracing the last two years, marks its sudden rise to power and career of almost uninterrupted success.

The failure of the Union cavalry to accomplish anything commensurate with the enormous expense of its maintenance during the first two years of the war is to be attributed primarily to "bad management." Instead of being organized into a formidable body capable of opposing the enemy's cavalry and undertaking independent operations, it was divided into detachments and used principally for escort duty to general officers, to furnish orderlies, guard wagon trains, and do picket duty around infantry camps.

The brilliant work of the Confederate cavalry during this same period proved a lesson to our leaders and made known the possibilities of this arm, and efforts were made to secure recognition and

better treatment for this neglected corps.

The first step in the right direction was taken early in December. 1862, when General Rosecrans organized all his cavalry into one corps and placed it under the command of General STANLEY. This move in the Western army was followed by similar action in the Army of the Potomac, and in the spring of 1863 General HOOKER combined his twenty-seven regiments of cavalry into one corps and gave the command to General STONEMAN. Two months later (June. 1863) occurred the first great cavalry combat of the war. This was fought at Brandy Station and is noted as the turning point in the fortunes of the Union cavalry. The numbers on each side were about equal (10,000), and after a vigorous battle continuing all day, in which there were numerous instances of charges and counter-charges with saber and pistol, by squadrons, regiments and brigades, the hitherto invincible Confederate cavalry was forced to seek the protection of its infantry and guns, while the Union cavalry withdrew unmolested across the Rappahannock.

McClellan (writing of Stuart's cavalry) says that this battle made the Union cavalry, and it can not be better expressed. Our cavalry entered the fight doubting their untried strength and skill, while the Confederates, with their unbeaten record, had only contempt for their foe. The close of the day found our troops confident in their power and the ability of their leaders, and they never again showed anything but the greatest eagerness to meet the Southern horsemen.

From this time to the close of the war we find the Union cavalry occupying its true relation to the other arms, and every important battle, campaign or military operation affords numerous instances of its service.

In the advance of the Union and Confederate armies to Gettysburg, we find the cavalry scattered well out to the front and flanks, and performing for the first time properly, the duties of screening and reconnoitering. When HOOKER was in doubt as to Lee's movements, he called upon the cavalry for information; and our cavalry, hurling itself upon the Confederate screen, fought the heavy battles

of Aldie and Upperville, drove the enemy through the mountains at Ashby's Gap, while the cavalry scouts looked down from the Blue Ridge on Lee's army moving down the valley toward Williamsport. This use of cavalry as a screen to conceal the movements of the army and to maintain contact with the enemy by means of reconnoitering bodies, charged with the duty of obtaining information of his movements, did not originate with our cavalry, but was revived by it. Napoleon used his cavalry very effectively in this service, but in the later wars of the present century it was very generally neglected. Its value on this duty made it one of the most important services performed by the mounted troops, and they became very efficient in its execution. If Pope had made a similar use of his cavalry in his campaign in 1862, Jackson would never have appeared unexpectedly in his rear.

On the battlefield the cavalry was usually held on the flanks, and its purpose there is well illustrated by the battle of Gettysburg. On the 3d of July, Stuart, in command of the Confederate cavalry, was directed to strike the rear of the Union line and create a panic there in conjunction with Pickett's assault in front. Stuart endeavored to pass around the right of the Union line unobserved, but his approach was reported, and the Union cavalry was on hand to check and finally to repel him.

The battle of Chancellorsville records a service that cavalry may at any moment of the battle be called upon to perform. When Jackson struck the right rear of the Eleventh Corps and the panic of the troops threatened disaster to the entire army, it was the Eighth Pennsylvania Cavalry, three hundred strong, that by a reckless charge checked the Confederate advance long enough to enable General Pleasanton to gather together twenty guns and hold the enemy until the arrival of reinforcements enabled a new line to be established. We find a similar instance in the heroic charge of the Fifth Regular Cavalry at Gaines Mill. This service frequently entails a sacrifice of the cavalry engaged in it, but the results obtained usually warrant it.

It was Pleasanton's cavalry, thrown out eight or ten miles in advance of the army, that seized and held the advantageous position near Gettysburg, which later enabled Meade's army to check and throw back Lee's triumphant advance. The advance cavalry under Buford held the position for four hours against the determined assaults of Hill's entire infantry division until relieved by the arrival of Reynolds' and Howard's corps. Another example of this use of cavalry is found in the seizure of Cold Harbor in the

Wilderness campaign. Sheridan realized the practical importance of this point to both armies, and although it was occupied by the enemy's infantry, while his (Sheridan) nearest support was nine miles distant, he boldly attacked and carried it after a stubborn fight. Ordered by Grant to hold it at all hazards, he intrenched and remained in position all night, and repulsed an attack made by Kershaw's brigade in the morning. At 9 o'clock he was relieved by Wright's corps, which marched all night to reach him.

The battle of Winchester gives a good illustration of the use of cavalry in turning movements. Sheridan's plan was to engage Early's entire line with his infantry, while one division and one brigade of cavalry, commanded by Torbert, was to operate as a turning force against the left flank. The movement was successful, and the cavalry coming unexpectedly on the Confederate left, decided the battle.

The dismounted fire action of our cavalry enabled it to be used on the battlefield in reinforcing heavily pressed points, as instanced in the battle of Gettysburg, when Buford's cavalry, dismounted and thrown forward in support of Doubleday's infantry, checked the advance of the enemy's lines. In the battle of Five Forks the cavalry, dismounted, fought by the side of the infantry, occupying a part of the general front, while two brigades were held mounted on the left flank to guard that flank against the desperate attacks of Fitz Hugh Lee's cavalry.

The duty of protecting our armies in retreat was one which often fell to the lot of the Union cavalry, and the manner in which it was performed is exemplified in MEADE's retreat from the Rappahannock to Centreville from the 12th to the 16th of October, 1863. The Second Cavalry Division formed the rear guard during the movement, and when hard pressed by the enemy's advance, it retired by echelon of regiments, the horse batteries being in the intervals between regiments. Although the armies were in actual contact during the entire retreat, the Union army did not lose a single wagon or gun.

In the pursuit of a beaten foe there is no parallel in history to the brilliant conduct of Sheridan's cavalry in cutting off Ewell's entire corps and compelling its surrender, and then following along on Lee's flank, delaying his march by constantly harassing him by the fire of dismounted men, and finally heading his columns and compelling his surrender by holding him at bay until the arrival of the pursuing infantry.

The use of cavalry to create a diversion in favor of the main

army is well illustrated by the clever manner in which Kilpatrick, in February, 1865, maneuvered his troops so as to deceive Beauregard, and keep his forces massed to defend Charlotteville while Sherman's army effected the crossing of the Pedee. Of a similar nature to diversions were the feints made by Kilpatrick's cavalry against Macon, and the more noted one against Augusta, Georgia. Sherman's real object was Columbia, but by sending his cavalry toward Augusta, he deceived the Confederate General Wheeler, who uncovered Columbia, and marched to the support of Augusta. He was held here for two days, skirmishing with the cavalry, and meanwhile, Sherman succeeded in crossing the Edisto and was well on the road to Columbia, which later fell without a struggle.

In conveying wagon trains the cavalry was indispensable, and the war furnishes many instances of the efficient performance of this arduous and lack of glory duty. A noted instance was the transfer of a number of trains of the Army of the Potomac under the protection of the cavalry corps in June, 1864, from White House, on the Pamunkey, across the peninsula to the James River. This move was made in the vicinity of the enemy, and desperate efforts were made by the Confederate cavalry to capture the train, but not a wagon was lost.

RAIDS.

Another important use of cavalry, and one which reached its highest development in our war, was the cavalry raid. These were independent operations of a strategical nature, characterized principally by secrecy and great rapidity of movement, which precluded the enemy from concentrating on any line to oppose them. The strength of the column varied from several regiments to an entire corps; it moved without wagon trains and was usually accompanied by a proportion of horse batteries.

Raids were undertaken for many different purposes and the examples of our war illustrate a variety of objectives.

The first important raid made by the Union cavalry occurred in the latter part of April, 1863. This was a small force of less than two thousand men, commanded by Colonel Grierson, and had for its object the destruction of property. Incidentally, it became a diversion in favor of Grant's operations around Vicksburg. Stoneman's raid, just previous to the battle of Chancellorsville, was for the purpose of destroying Lee's communications and cutting off his retreat in case of his defeat. Kilpatrick's raid to Richmond in March, 1864, was to effect the release of Union prisoners confined

there. The raids of Stoneman, McCook and Kilpatrick around Atlanta were directed against the railroads which supplied Hood's army.

Sheridan's raid during the Wilderness campaign was intended principally to draw off the Confederate cavalry and thus facilitate the difficult movements of the troops and trains of the Army of the Potomac. It was also directed against Lee's communications with Richmond and the destruction of Confederate property.

Wilson's great raid in the spring of 1865 was the most extensive operation of this kind undertaken during the war. His force consisted of 13,000 men, and his object was the devastation of a large area of Southern territory and the capture of Selma, one of the most important depots of military supplies in the South.

The raids of Stuart's cavalry furnish examples of other objectives; as for instance, his raid around the Union army in front of Richmond to obtain information of the strength, dispositions, intentions and communications of the Federal forces—and again, Stuart's raid around the Union army, after Antietam, was intended to draw off the Federal cavalry from the pursuit of Lee, and thus enable the Confederate army to withdraw unmolested and reorganize its shattered forces.

The development of the cavalry raid is a sequel to the use of dismounted fire action. While mounted troops depended on the lance, saber and pistol, they could never venture far from their supporting infantry, and were easily checked by a comparatively small number of dismounted men strongly posted. Now, an army composed of cavalry alone, such as Wilson's column, may go anywhere in the theater of operations, for it contains within itself a power of both offensive and defensive action.

The use of dismounted fire action may be considered the great cavalry lesson of our war, and while many European writers refer, slightingly, to the American cavalry as mounted infantry, other nations must in time adopt our methods if their cavalry is to have a future career of usefulness. It is true that our troopers were mounted infantry; but they were true cavalrymen also, as was shown on many a battlefield, and it was this combination of functions which developed the ideal soldier, or the man who fought effectively both on foot and on horseback.

CONVERSATIONS ON CAVALRY; BY PRINCE KRAFT ZU HOHENLOHE-INGELFINGEN.

TRANSLATED FROM THE GERMAN,
BY LIEUTENANT CARL REICHMANN, NINTH INFANTRY, U.S. ARMY.

THIRTEENTH CONVERSATION - (Continued).

H. I cannot refrain from reverting to that portion of the second part of the riding instructions which treats of the inspection, and gives illustration of the manner of conducting an inspection. It is expressly stated there that side paces in squads are to be ridden by command, and likewise shortened paces, in squads.

S. I know very well that these illustrations have done much harm where, in conformity thereto, the instructors go through the program in a perfunctory manner throughout the year, or, at any rate, during the last few months or weeks. That is neither the intention nor the sense of the riding instructions. The illustrations are expressly stated to be given as illustrations, not as rigid patterns. They are also given with reference to one point alone, not to many points. It is nowhere stated that practice should be conducted in that manner. On the contrary, all precepts of the riding instructions which have reference to the exercises, i. e., gymnastics by means of which man and horse are to be trained, assume that the rider is riding by himself. Again and again, you find a caution, "much individual riding."

H. How do you expect a squad at inspection to ride side paces on the double trail, with distances and the shortened paces, if they are not practiced in them?

S. I assure you they will do much better at the inspection, even in squads with distances, when these paces have never been practiced with distances, and always during individual riding. Any inspector who is an expert rider will prefer to see these paces on each horse separately. In case, however, he has not the time to do

so, and merely wishes to get a general idea, side paces will go better when not previously drilled. I will admit that each rider will make more mistakes and that each horse will go worse than in individual riding; still it will not be as bad as if they had been drilled en bloc. That is very natural. For in such exercises of higher paces with distances by command, the rider will sometimes commit an error of riding for the sake of keeping distances; he will give an aid which is wrong in itself and unintelligible to the The horse remembers it, and next day indicates it by wrong response to the proper aid, by obstinacy which may be slight at first. Daily repetition of riding of such exercises with distances in squads increases the evil. Every riding instructor will have the experience, that when passing to the side paces in squads after they have been taught singly, they go better during the first than during subsequent days. If he fails to revert at once to individual riding, he becomes stubborn and desperate, simply because he does not realize that it is all his own fault. If, at the inspection, he desires to show off as perfectly as possible the illustrations given in the riding instructions, he should practice these paces in individual riding exclusively. Many commit the error of continuing the riding of these paces too long at a time. In the beginning it is beneficial to all horses to be content with two or three steps, and of many no more than this should be required. But practicing the same in the squad is apt to mislead the instructor to continue them too long, to the detriment of the horses. In the end it will provoke obstinacy, for when he has once given the order, he wishes to observe each pupil, one after the other, and by the time he has done so, the pace will have been continued too long even for the very best horses.

H. I will now suppose that the inspector requires the presentation of the squad according to the illustrations in the riding instructions, and that, according to your principle, each rider rides the the side pace in accord with the conformation and degree of training of the horse, i. e., one will ride the perfect side pace, the other the incomplete side pace, another a higher degree of position, another the one-sixteenth side pace with one-half foot distance between trails instead of a short pace. The inspector will then find fault and refer you to the riding instructions where the exact distance between trails is laid down.

S. He will not; for he is a man who understands the art of riding. He will commend the rider who fails to ride the side pace on command, if the horse's conformation prevents it; he will com-

mend the rider for taking less position and less distance between trails because the horse is not sufficiently advanced to comply with the full measure of the regulations. He will be pleased to see that there is "individualizing," for he is well aware that the precepts of the riding instructions aim at the highest perfection of training, which is unattainable with defectively formed or developed horses. He will approve this restriction to a less degree, provided that the pace be ridden thoroughly well, for he knows that faulty riding of the highest forms of these exercises will injure the horse. All that the inspecting superior knows very well, because he is an experienced rider. We should be founding the principles of our training on very insecure grounds were we to presume, and act accordingly, that the inspector knows nothing about riding.

A. In the three other squads of the second riding class which we designated as Nos. 9, 10 and 11, you would not, I suppose, permit side paces on the double trail?

S. Why not? Everything in its proper place! It depends on the capability of the horse and the degree of the man's training. In Squads 9 and 10 these non-commissioned officers will probably ride who cannot ride remounts, and therefore do not belong in Squads 1 to 4. It is very possible that a non-commissioned officer may acquire the necessary skill in riding at a later date, particularly if his training has been interrupted by details as clerk, etc.; and if it becomes certain that he has talent, his skill will be promoted by riding in Squads 9 and 10. Similarly it will be with some four-year volunteers and three-year men whose talents do not become apparent before the second year, and whom, it is hoped, it will be possible to class among the trainers.

H. Will suitable horses be found in these squads since you have taken the best horses for the recruits?

S. Many good horses will still be available. One may be too high-spirited for the recruit, another too lazy. One has too high paces and bumps the rider too much. The action of another may not be sufficiently fresh. All these horses may be perfectly built and sufficiently advanced in their training to mount unfinished riders and give them an idea of the higher lessons and their purposes.

H. In Squad No. 11, the horses of which will chiefly consist of candidates for the next condemnation, and which squad consists of more horses than men, because the men do not ride daily, you will probably not expect the higher lessons at all?

S. Not at all. Among the candidates for condemnation might

and should be the best ridden horses, and which are to be condemned solely because they begin to get old and are not expected to remain fit for service for any length of time. The same will, no doubt, be the case with those which suffered in bone and sinew and are to be condemned on that account. Among them should be the best ridden horses. It is not a good indication of the riding of the squadron if it has horses condemned as "unfit for riding." The suspicion is bound to arise that the squadron has them condemned because it cannot manage them, and retains instead old and numb horses which are no longer equal to the strains of a campaign. As regards the riders in this squad, there may be men of talent among them. The causes interfering with their services have nothing to do with riding. Why should not among the tailors and shoemakers present with the arm, be some men who have talent for riding, though the well-known proverb points out that it is not the rule? Nor can I understand why in Squad No. 8, composed of such of last year's recruits as have lagged behind and are to undergo a second course of training, there should not be some riders who make progress in the art of riding. One may have lagged behind owing to sickness during his first year of service, and yet he may be well fitted for riding.

H. The riding instructions lay down the limits within which the first riding class is to be kept. If any man is to be advanced beyond, he should be removed from the first riding class.

That obtains for the winter when the art of riding as such is chiefly cultivated. During the summer such men of the first class may well be advanced farther in individual riding, just as the riding instructions state that the recruits designated as future remount riders should, during the summer, be taught the aids of the second part on well trained horses. On the whole, you would make the experience that if the training of the horses has been conducted in this manner for four years before they are expected to train the rider, if, for the rest, the riding service has been managed practically, if the men be given full freedom in individual riding only, if the renewed kniebeln and systematic retraining of all squads be omitted, and if higher lessons be taken up at a late date, then, I say, the art of riding will be much better promoted in the squad, and that among the old horses of the squadron there would be a great many more capable of going the higher lessons thoroughly well than under the system now in vogue. Here BAUCHER'S excellent words: "Plus vous allez lent, plus vous irez vit," would be confirmed. It would preserve the horse's strength. A

squadron which manages the instruction in riding on these lines during ten normal years of peace should come to such a point that the old contingent of horses, when condemned, would, with a few exceptions, contain all horses originally belonging to it and that all would be splendidly trained horses. They would still be so serviceable that it will make the squadron commander's heart bleed to have them condemned, and that other troops would be glad to retain them for one or two years more.

H. I have often heard it said that it is good for any horse to be thoroughly bent anew and worked over again in the fall and winter of each year, because it loses during the summer exercises. Schmidt expressly demands it from all riding classes.

S. I acknowledge that I find it difficult to answer you, because I would like to say yes and no at the same time. If the horse has deteriorated through the great summer exercises and maneuvers, i. e., lost in balance and position, it should be retrained correspondingly. The horse should not deteriorate, however. If every rider exercises his horse individually and daily during the summer under the instructor's eyes, excepting days of regimental, brigade and divisional drill, and days of maneuver, whatever may have been lost will be quickly regained; a stage is then gradually reached when the position is not, and is not permitted to be, impaired by drill. In the fall and winter every horse will certainly be bent over again; the only question is by what means. If the gait is properly increased and diminished so that the high hand is brought under, a good deal of bending will be accomplished. Still more, if the horse is given the second position. The correct medium trot does much bending; most of all, the correct, sustained drill gallop. I must admit that SCHMIDT makes the demand you mention. He adds expressly, however, that it is not to be understood as a repetition of the training, but that man and horse should advance in their training from year to year, and that the manner of training the older horse subsequently to the maneuvers should correspond precisely to the degree of training of the horse at the time of its return from the maneuvers. If he meant thereby that every horse should be tormented anew with a schulterherein, renvers and travers, whether it be necessary or not, I say "no!"

H. You said just now that the horses of the last squad, candidates for condemnation, could go the higher lessons well because they ought to be the best horses. Don't you think that these animals will forget the higher lessons altogether and become stiff when they have been recruit horses for four or six years?

- A horse will never unlearn what it has once learned well while in the state of bodily development, and what it had perfected by the time it possessed its full strength. Exercise will keep it in practice, and the higher lessons are merely salutary gymnastics. The horse will no more forget these things than will the author forget how to write though he may be unable to recite the rules from memory. Nor will the horse lose the capacity for the gymnastics of the higher lessons, for the motions, turnings and jumps occurring in ordinary service will keep the muscles in training. It is possible that the remembrance of the aids used for putting these lessons in operation may sometimes become impaired. treatment will soon recall them to the horse. One thing I would ask you to keep strictly in view: No training, no kniebeln are to be permitted in those squads of the present second riding class which are not specifically charged with training. They are the squads designated by you as Nos. 9, 10 and 11. If the rider improves so that he can and may be permitted to ride higher paces on a well trained horse, it should be done for the benefit of his training, not that of the horse. The progressive training of the horse, training and retraining, should be done in these squads only which contain the most perfect riders, i. e., in those which you have designated as Nos. 1, 2, 3 and 4. It should ever be kept in view that the horses are not to be taught the higher lessons, that these lessons are merely gymnastics, means to the end of making the horse obedient and efficient for war. That end attained, training ceases. The horse will need these lessons no longer. If some horse in Squads Nos. 9, 10 and 11 is to go through these lessons, it is for the sake of the man's training. That accomplished, it should likewise cease.
- H. I believe I am now sufficiently informed how you would like to have the riding service handled during the winter, and I simply wish to ask you now whether you approve of our present manner of passing from the period of riding to that of spring drill. From our previous exchange of views I conclude that you approve, with a few exceptions, of taking May 1st, as the day on which the recruits are placed in ranks, and drill by troop, platoon and squadron is commenced?
- S. Not at all. You mentioned May 1st, and I accepted it as a date equally good as April 1st, May 15th, or some other date, without sanctioning the particular date.
 - H. And what date would you designate?
- S. None. I mean this: In the spring, when the weather permits the recruits to go into the open riding ground and to eschew

the hall, they are to practice individually or in the square under their instructors, while the squadron commander drills the old men on old horses, by troop, platoon or squadron more frequently, and finally every day. The squadron commander selects each day those men who, when the squadron is formed, may participate in a half hour drill. I spoke of that the last time. The number gradually increases, so that finally four platoons of eleven files (with some blank files) may be formed. From now on he lays more stress on drill by troop, platoon and squadron, but never so much as to use up the horse's strength, or have no time left for dividing up the squadron daily-not only all the recruits, but also the old men on old horses-among their instructors for individual riding under supervision, or, sometimes, within the square. When the squadron commander will be able to drill for the first time with four platoons will chiefly depend on the time when winter ceases. More and more recruits will gradually take part in the drill of the squadron, which will finally drill daily with 109 horses (110, counting in one one year volunteer), provided no horse is absent on account of sickness or detail. When, however, the first recruit may take part in the drill, when the squadron can be formed in four platoons, when the last recruit will ride in ranks, can neither be predicted nor can a definite day be fixed, since, in the latter case, the training would be conducted with undue haste. Variations of as much as four weeks should be allowed for. In all squads, however, individual riding, tummeln, riding within the square, should go hand in hand with drill at all times, even throughout the summer.

H. When all recruits are in ranks and no horses absent, sick or on detail, you can turn out at the most with 110 horses, after deducting twenty-six remounts of both contingents. In the most favorable case you would be unable to comply with Schmidt's demand to turn out with four platoons of twelve files each, among them one blank file at the most, for you have to mount fifteen non-commissioned officers and four trumpeters.

S. I told you once before that I consider this demand of Schmidt's excessive, because it will compel us to take the old remounts along every time, and at a period when most of them are not completely developed and cannot have finished their training, and would therefore surely be spoiled by taking part in drill during the second year of their presence with the squadron. The old remounts may be turned out for parade, but I would excuse them from fatiguing drills throughout the year if practicable. We would always have some horses on the sick list or on detail and turn out

with eleven complete files at best. To that number let us adhere and fill further details by making additional blank files. During the war we were fortunate when we could turn out with nine or ten files on account of much detached service. A few blank files more or less in peace time make no appreciable difference.

H. I understand what you say. I also think that it would be a good preparation for the fatiguing period of squadron drill.

- S. The period of squadron drill should not at all be more fatiguing than the previous period of riding in the open. Permit me again to make an approximate calculation. Assuming that during one month of the winter frost prevents us from using the drill ground, there remain five months—from October 1st to April 1st—or twenty-one weeks, during which the old riders drill half an hour twice per week by troop, platoon or squadron. Assuming the winter (as in the present year) does not permit the use of the drill ground before April 1st, the squadron from then on rides daily half an hour in this manner, i. e., twenty-five times and, toward the last, with a number of recruits in the ranks. That makes sixty-seven half, thirty-three whole hours of exercise, or sixteen drill days at the least, or an entire drill period preceding the time when troop, platoon and squadron drill used to commence. It thus becomes plain that drill in May would not entail unusual fatigue.
- H. It would be a great gain for the shedding period, during which we like to spare the horses or, at least, dislike to get them warm and then let them cool off in the open air.
- S. Certainly. But they must be taken into the open every day in spite of, and because of, that period. Consider further the advantage offered by this method of training now when it has been decreed from above that regimental drill is to begin each year in June. The training of the squadron need, nevertheless, not be hurried if the matter is managed in the manner pointed out.
- H. I would like to express a doubt. Don't you think that the last recruits with their horses, who perhaps do not participate in the squadron drill until the first ten days in May, will spoil the order in the squadron because they are not sufficiently practiced?
- S. Much less so than if they ride poorly, and take part in drill before acquiring sufficient skill in riding.
- H. Don't you also think that the horses of the last recruits if placed in ranks in the midst of the drill period will not yet have sufficient wind for drill?
- S. The recruit should ride as much drill gallop in individual riding as he would in drill, and during individual riding in April

the squadron should be in as good trim as during drill in May. The recruit's horse is therefore in training whether it participates in drill or not.

- H. Will the horses bear this uninterrupted training winter and summer?
- S. Better than the exertions now and then required of them under our present system. I desire that they may be given healthy and salutary exercise and work throughout the year, and that they be never overworked or driven to death. At present they are being driven to death twice each year, once in the period of spring drill, once in the great summer and fall exercises, to which they are all the more unequal as they enter upon that period in a heavy condition, with hay-bellies and fat lungs. The efforts I mean to require of them during the period of spring drill are not to exceed the work to which they were accustomed the whole year round, and less than the efforts heretofore demanded of them during this period. The exertions during the great drill and maneuver exercises will remain the same as heretofore, but the horses will stand them better because used to constant work. In your letters on cavalry you demanded still more. I cannot deny that the other arms must demand such exertions from the cavalry if the latter is to serve its purpose. But it can be equal to those demands only if prepared during summer and winter in the manner pointed out by me. If treated as I would like to have them treated, the horses will never be fattened and thick-bellied, but will possess strong muscles, remain fresh in their legs, and go in confident harmony with the rider, nor will they ever run down so and look as miserable as may nowadays be sometimes observed after the great cavalry exercises. More than once, as I have told you, I saw riders who had to dismount and drag their dead-tired animals painfully along by the reins to reach their quarters after the exercises.
- H. Some years ago the war office added a half a pound to the ration of oats. This is now being saved as a rule in order to give the horses an additional daily allowance of a pound or more during the time of great fatigue. Do you consider the present ration sufficient to keep the horses in working trim throughout the year?
- S. According to all I have told you it will be more so. I will not deny that I would prefer a more ample ration. Better quality, however, would be preferable to greater quantity. According to present practice the "intendance" lets the supply of oats to the lowest bidder. The contractor, of course, furnishes the least nourishing oats, which gives little strength. During the war our horses

stood more in France than in Germany during peace, because the French oats were excellent.

- H. I cannot refrain from pointing out to you, that, according to our principles of training, not all horses are kept so much in wind as seems desirable to you, but only the seventy older horses under the older riders. The sixty-six remounts and recruit horses which are relegated to the hall during the winter will be all the less in shape for fast gaits as you require much individual riding in the hall while the greater portions of the squads are comparatively resting.
- S. The new riding halls are all very spacious, and since they are used by remounts and recruits only, these horses can get sufficient exercise in them. I cannot deny, however, that where such large halls do not exist, it is an evil I should like to remedy if it were possible. For that reason I would have the squads mentioned ride in the hall so long only as the necessities of the weather make it unavoidable. As soon in the spring as possible we must go into the open and there accustom the horses gradually to more and more sustained fast gaits, and put them in good wind.
- H. Do you not fear that your principles of training conflict with existing regulations?
- S. Where and when? Did I not prove to you, point for point, that I am complying with the regulations, that I want the work conducted strictly in accordance with the riding instructions? All I want is to banish a certain perfunctoriness.
 - H. And existing old traditions.
- S. On the contrary. I am recalling the good old traditions of the flourishing time of cavalry under the Great King. Any troop commander may conduct the training of recruits on my principles without having to fear disapproval from his superiors.
- H. Your principles culminate in this, that you do not want final riding inspections. The squadron chief cannot abolish them. He is the one to be inspected. The superior will come and hold snaffle inspection, final riding inspection, etc. What is the squadron chief to do?
- S. He obeys, of course. He must submit to inspection if the superior wills it, and the latter may inspect when, what and how he pleases. In his mind, however, the squadron chief should not consider it a final riding inspection, should not coach for it, should not drill exhibitions for it.
- H. Then he will fall short of the other squadrons, and to compete with them he must manage the service as they do.

S. Not at all. He does not fall short; he will be ahead of them. Though the superior may, for instance, have the men ride in squads only, with distances in the square or hall (which is improbable, since the individual riding is also habitually inspected), I have previously shown to you that riding within the square with distances will go better if the chief weight is placed on individual riding than if you simply keep on coaching in this formation alone. Anyway, all the squads have sufficient practice in riding in the square with distances, if, as I have pointed out, they make the proof of the example at the right time, toward the end, every day. The only thing I don't want practiced by squads, with distances and by command, are the higher lessons (side paces on the double trail and paces with correctly shortened gaits). I have also explicitly stated that, if asked for, they will go better by squads by command when they have not been taught that way than if they had been drilled. In this I am not developing a theory. No, I assure you, I speak from many years' experience, for the experiment has been made for several consecutive years.

H. From what you have stated at various times, I can, in the main, tell pretty well how you wish the regimental commander to make his inspection. I merely meant to ask you to remove some doubts occurring to me. You wish, in the first place, that the regimental commander do not fix any day for inspection, but be present at the instruction.

S. As often as possible, and always unexpected. In this he should be as thorough as possible; should therefore not inspect everything on one day, but only part of the squadron, so as to invariably inspect with fresh, unabated attention. He should do it according to a prearranged plan. For instance: He proposes, beginning with fall, to look on five times a week at the service of the squadron. He will go once every week to each squadron. In this squadron he looks on once at the drill of the older men on the older horses, the individual riding, and the riding in the square; another time at the training of both remount squads; a third time at mounted recruit drill. Allowing for interruptions, he may be present once each month at the training of each riding squad of the regiment, and see for himself whether the service is conducted rationally, and apply timely remedies to faults discovered in the course of training. The daily drill schedules enable him to always arrive unannounced and unexpected. When he knows his regiment once, he will soon be able to lighten his task by appearing less frequently in the squadron which works correctly according to his

notions, and perhaps more frequently where his advice seems more necessary.

H. This is practicable with the regiments which are united in one garrison. Nearly half of the German cavalry regiments are more or less scattered over several garrisons. The War Department grants the regimental commander travel allowances for a limited number of travels for inspecting outlying squadrons.

S. What of travel, of expense, of allowances? The commander rides over to the other squadrons, inspects the service, and rides home again. He ought to be glad to mount his horse frequently and make long distance rides. It will keep him fresh and habituated to being on horseback.

H. In any kind of weather also?

S. Has he not to be on his horse in all kinds of winter weather in war? The man who can't do it in peace cannot command a regiment in war. This daily habit of remaining long on horseback preserves the cavalryman as such, and averts pain in the spinal column which a single great exertion in war may bring on.

H. I believe your demands on the commander are too severe, as he will have attained a certain age before reaching that grade. Not every regimental commander can remain so fresh as to ride bareback in the chase as those two generals last fall at Hanover. If every regimental commander incapable of this feat were declared unfit for service, our regimental commanders would eventually be too young to bring to the position the requisite experience in the details of training, and we should lose many a commander who, on account of his experience in matters of riding, is of inestimable value. You said yourself that one never learned all there is to riding, and that a good rider and instructor needs years of experience.

S. In a long peace it would likewise be impracticable, and too much of a draft on the pension appropriations, to have none but young regimental commanders. The management of service and inspection should therefore be so arranged that all officers are confirmed in the habit of remaining long in the saddle. At present our peace service is not suited to produce enterprising commanders. At a certain age (forty to fifty) the officers confine themselves to the most indispensable requirements of the riding service. The indispensable is not sufficient to keep them in practice. How many officers stand dismounted in the hall for six months? When the habit of riding is relaxed, the delight in riding relaxes; also the dash and delight in fighting; and when at the outbreak of a war

such a leader has to ride, it is an exertion for him; he has pain in the back, and takes no delight in war. If the service were managed as I wish, all officers would have to ride daily, rain or shine; the superior also would have to inspect in all kinds of weather. As long as they remain in the service they would remain in practice, and would not become prematurely old in body as well as in the manner of thought and action. The study with its desk is not sufficient for the soldier, least of all for the cavalry leader. He belongs on horseback. But in our days even the lieutenants become disused to riding by their duties as dismounted instructors, by driving condemned horses, and by the vicinity of railroads to the garrisons. The excursions of former days, for visits in the neighborhood and the return at night, had much that was instructive and practical for cavalry officers. No particular interest in that direction exists to-day.

H. There is interest, but no opportunity. That there is interest you may see from the distance rides.

S. This substitute is unfortunately indulged in by the young man alone. The par force chase would have to be made obligatory. It would be in the interest of the older and highest officers, as it would keep them vigorous. They are a splendid preparatory school for cavalry leaders to learn how to find their way in the terrain and form their resolutions quickly. In the presence of the enemy you cannot rely solely on scouts, patrols; adjutants sent to the front, you must ride forward yourself and inspect the terrain it you wish to profit by it. The officer who learns how to orient himself in the par force chase will be a reliable leader to his troops in the terrain. That should not be underestimated. At any rate, it will raise the confidence in one's own power and enterprise; and the regimental commander who has ridden in the chase in the fall will not find the detached squadrons too distant to visit them on horse-back though there be a railroad.

H. Many garrisons of single squadrons lie so far apart that it is absolutely impossible to visit them as often as indicated by you. Pless, for instance, is two days distant from regimental headquarters.

S. In that case it only remains to take the cars to these garrisons to inspect them. Still, if the commander is imbued with zeal and interest for his position, he will not refrain from visiting these garrisons at his own expense oftener than the government grants allowances.

H. Certainly, if he has means of his own. Our officers are

accustomed to spend their private means on the service. Not every regimental commander has private means, but most of them have families. You would not make the qualification of a regimental commander for his position dependent on his private means?

S. Well, if it is impracticable for the regimental commander to visit some of his squadrons frequently to witness the individual training, he must apply the method of frequent inspection suggested by me to those squadrons alone which are at regimental headquarters or in close vicinity. The more distant squadrons he would only visit as often as he is granted allowances for. In that case he should remain for some time with each squadron, and inspect the individual riding in this manner that no exhibition be made for his sake, and that he simply witness the instruction and never witness more in any one day than he is able to observe closely with full and fresh attention.

H. How do you wish the brigade commander to inspect?

- S. The regulations make the regimental commander responsible for the individual training of the regiment, as you reminded me yourself some time ago. Hence, the brigade commander would never during the winter course of training have anything to do with the details of the riding. According to regulations he inspects the formed squadrons. On that occasion he may take some riding squad and have it perform anything he chooses, down to individual riding of the men of different contingencies. I do not, however, wish the brigade commander debarred from witnessing the individual training of the squadron. Any body of troops ought to be glad of, and see an honor in, the interest manifested by general officers in the most minute details of their service. If, in doing so, the brigade commander desires to get a correct insight in the individual training, and exercises beneficial influence, he should be present with the regimental commander when the latter witnesses the individual training of one of his squadrons. He will then perceive whether the regimental commander's action is in the right direction, and will have sufficient opportunity to equalize differences of opinion. If he sees that the regimental commander's method is correct, he need make no further inspection of detail in that regiment.
 - H. Take now the division commander.
- S. The division commander who is interested in the details of training may do like the brigade commander. He will probably have to limit himself to witnessing the individual riding of the squadron of each regiment of his division per year. His other

duties will hardly leave him time for more. Nor is more required. He will get along with less, if he except those regiments whose commanders, by their methods, have previously gained his unqualified approval. If, however, the division commander comes from another branch of the service, as is the case in many mixed divisions, his inspections of details of riding have no value for the troops but that of the honor done them by his presence.

H. I was from another branch of the service; still, as often as I could, I was present at the detailed riding inspections of the cavalry regiments of the division commanded by me. I did it for the sake of seeing and learning.

S. Then, it is true, the troops will have another, indirect benefit from it.

PROFESSIONAL NOTES.

AMERICAN HORSES FOR FRENCH REMOUNTS.

[Regimental Standard.]

During a recent visit to Indianapolis, Ind., I heard, by a fortunate coincidence, that there was in that city a commission of French officers engaged in the purchase of horses for the various mounted branches of their military service. Not wishing to lose such a valuable opportunity, I quickly sought their acquaintance, and was very courteously received.

The commission consisted of three field officers, representing the artillery, cavalry and veterinary staff, respectively. My confrere, fortunately for me, spoke English fairly well and acted as interpreter, in addition to his professional duties, which were onerous in the extreme. His advice and opinions were decisive, not only on the subject of soundness, but on the horse generally; conformation, gaits, action, etc., etc.

If any one member of the commission objected to a horse, it was immediately rejected, and before being led away a slight vertical line of hair was removed from the near side of the neck by a snip of the scissors, so that it could not be again presented, for some time at least. Everything was done methodically and quietly. My confrere informed me that the method of examination and purchasing were minutely laid down in the French Army Regulations.

Although the purchase money allowed by their government was about \$150.00 for each horse, the commission was allowed much latitude, for I saw horses purchased for from \$110.00 up to \$225.00. In fact, they did not let a good, desirable horse go away from them if it was possible to get him.

The horses purchased, being for various branches of the service, ranged from fifteen to sixteen hands high, and from 900 to 1,150 pounds in weight. The small horses being for light cavalry, as hussars, whilst the larger ones were intended for heavy cavalry and the artillery.

They were extremely particular as to the anatomical soundness and freedom from blemishes and wire cuts. They also objected to brands of any kind, although they did occasionally purchase a branded horse, provided it was a very desirable animal and had only a very small brand, not larger than three inches, and not conspicuous.

They bought stallions, mares and geldings, but preferred mares for many reasons: 1st. Greater powers of endurance; 2d. Live longer; 3d. Can perform more work on less keep; 4th. Withstand more hardships than horses; 5th. They bring a better price when condemned; 6th. Are said to be more intelligent; 7th. More amenable to instructions and drill; 8th. Can endure the climatic extremes better: and 9th. Less liable to disease.

They were particular that the head should be small and nicely set upon the neck. If the head of the horse could not be flexed on its neck, the animal was immediately rejected. Excoriated mouths, lips and ears, injuries from curb-straps and bits, formed a frequent source of rejection, as animals thus affected invariably resent all attempts at any gymnastic instructions which involve their mouths, as suppling their neck, altering their center of gravity and base of support, etc., etc., so necessary to the trained cavalry charger.

The commission purchased in all two hundred horses, shipping direct to France, via Baltimore, their immediate destination being the cavalry school at Saumur, where they are to undergo a course of training previous to being distributed to regiments.

In making a purchase, the price of the horse having been agreed upon by the commission, it was offered, and no hope of a further advance of this was ever entertained, such a course being strictly forbidden by their army regulations; a very wise arrangement, in my opinion, saving both time and trouble. Each animal accepted must measure at least sixty-nine inches chest circumference at the eighth rib.

The commission selected Indiana as their base of operations, after visiting many other States, owing to the superiority and great variety of well-bred horses to be found in the "Hoosier" State. It was a clear case of "putting the parson in the center of his parish," for, although the rejections were probably eight or ten to every one accepted, the average horses of the former category would have been gladly accepted for the American cavalry service—notwithstanding recent official statements to the contrary. Particular attention was paid to the gait, the walk, trot and gallop insisted upon, no other gait accepted. Horses with vertical shoulders and short pasterns, and sway backs were rejected on sight.

The modus operandi of examination was as follows, as per French army regulations:

All harness was removed and a halter substituted for the bridle, the horses being placed on a perfectly flat, level plot of ground. Then all the members of the board, each acting independently, proceeded to examine the animal with regard to his conformation, one prominent fault being mentioned, as straight shoulders, short pasterns, crooked limbs, ewe neck, big head, short neck, high withers, hollow back of the shoulder blades, sway back, weak loins, badly

ribbed back, round chest, excessive angle to the ribs, oblique croup, or limbs malplaced, formed an immediate cause of rejection. But if this examination was satisfactory, he was then led about at a walk and trot. Here lameness, oscillations of the shoulders or croup, narrow chest, wide chest, calf knees, knock knees, paddling, interfering, speedy cuts, narrow hips, too wide hips, small feet, excessively large feet, weak hocks, too near or far apart, brushing, etc., and low action were quickly detected. If this part of the examination should prove satisfactory, the horse was turned over for professional examination, and they were extremely particular in this respect and took no chances whatever. If finally accepted, he was branded and paid for.

The animals purchased were very well selected, being clean limbed, small headed, compact, short backed, very strongly bound, well muscled horses. Coming, as they all did, from small farms, they were in splendid condition and gentle, and, in this respect, forming a favorable contrast to our military, prairie fed "bronchos." They were all of a kind, intelligent disposition, evidently having been well treated from their colthood. The attendants walked about them fearlessly, handling their limbs and hind parts with impunity. The veterinarian personally examined and handled each limb, and each foot had to be raised and tapped with the hammer, as if being shod, a feat which would be performed at the risk of life and limb if ever our equine military candidates were subjected to it.

The entire performance struck me as being very prompt, business like and systematic in every way. Each member of the commission evidently understood his business, and knew exactly what he was sent to purchase. There were no words wasted nor an unnecessary one spoken. Horses were purchased in open market direct from the owners, thus saving the sum which would go to the contractor, or middle man, as in our antiquated method of buying from the contractors.

I have no hesitation in stating that it would be an impossibility to select on our Western frontier, at any price, a bunch of horses that would in any respect approach those which I saw purchased in our own markets for the French army, an examination of which disclosed careful selection, keen, educated judgment, and "horse sense" generally, on the part of the purchasers, which could rarely be met with. These qualities were exercised under extremely favorable surroundings, for, in the matter of well-bred horses, Indiana ranks second to none. In 1894 the same commission visited Indiana and purchased a large bunch of horses. These created such a favorable impression, upon their arrival in France, that the authorities there made immediate arrangements for an annual supply from the same source.

I was informed that all the French government stud farms were being discontinued; that all the equine reproducers must be professionally examined and rejected as such, if affected with hereditary disease or unsoundness. All stallions must be registered and examined annually. The produce of stallions, owned by the French government, from mares, the property of citizens, are purchased at stated prices when three years old, if fit for military service. In France horse breeding is directly encouraged by the government

offering annually enormous sums as prizes.

The beneficial results of a course of instruction on equine conformation, etc., etc., which every mounted officer of the French service undergoes, was apparent at a glance. At a word or sign a rejected horse was removed by the attendant (a French soldier). The usual expostulations, praises, etc., of the would-be horse trader were conspicuous by their absence, and even when indulged in, did not receive the slightest attention from the commission.

The horses intended for the French service are bought by special committees under instructions from the Minister of War. Army horses are divided into three classes: 1st. Horses de carriere, for the equestrian schools; 2d. Staff horses for officers; and 3d. Troop horses, the latter being divided into reserve, line, light cavalry and artillery (saddle and harness), and are distinguished according to their qualities as very good, good or passable. The schedule price is neither minimum nor maximum, but is looked upon as representing the value of a good horse in each category. It is understood that a sufficiently large margin is left to the officers of the remount depots for the practice of economy, either by encouraging the production of good horses by paying more for them, and in order to give a proper value to animals that are difficult to obtain, and which might be in private demand.

Staff horses are classed as follows: 1st. Ordinary—regular conformation, medium neck, sufficient power and speed, large head, white color, washed mane, tail or coat, and slight blemishes are included; 2d. Good—sufficient breeding, a good neck, regular conformation, strong body and members, good gait; 3d. Very good—good breeding, good conformation, fine, expressive head, a beautiful chest, strength, good members, prominent tendons, brilliant gait. The price of an ordinary horse is seventy-five to 150 francs less than a good horse, and the value of a very good horse 100, 150 to 200 francs more than the average. The price of a grey horse is one-eighth less than his class. These data convey nothing absolute,

and are only points of reference.

Troop horses: 1st. Passable—medium conformation, defects of equilibrium, want of chest measurement or blemishes; 2d. Good—enough neck, strong body and members, sufficient weight, harmonious conformation, good action, fair physiognomy, solid coat and energy; 3d. Very good—a good physiognomy, neck well attached, good body, beautiful chest, good members, fine coat, power, long gaits. The passable horse, of which a limited number should be bought, commands one-fifth less than schedule price, and the good horse fifty to sixty francs less than the schedule price, while the very good horse is seventy-five to one hundred francs more than average. The grey horse is one-eighth less than his class, and the purchasing of this color should not be encouraged, being unsuitable

for war service. Any horse one-fifth less in value than the average should be rejected. It is important to make marked difference in prices according to quality, so as not to be always confined to the average prices for very good and passable horses. The sellers should be convinced that the committee judges impartially and as accurately as possible, and that they pay the military value of a horse. A horse may, in fact, have considerable commercial value, and still be unsuitable for military service. The hollow back depreciates the horse for saddle, renders it unfit for service. must not be forgotten that a slightly hollow back, with narrow chest, at four years old, will be strong and broad at six. A proper consideration is not always given to the difference existing between the four, five and six-year-old horse. With the four-year-old everything is clumsily builded up; his future conformation must be guessed at—he will certainly gain. The six-year-old, on the contrary, will remain about the same. Still the horse, and especially the mare grass-fed until six years old resembles the grain-fed horse at four. Only the horse which is really worthy of the name should be classed as an officer's horse. We should not yield to any apparent qualities which are not backed by strength and endurance. Reasoning thus, it would very often happen that the officers' horses would actually be inferior to the troop horses. M. J. TREACY, Veterinarian Eighth Cavalry.

CAVALRY EQUIPMENTS.

Indian campaigning has ceased to be the daily employment of the army, and this leads to the question as to whether the cavalry equipments which proved their worth by flood and field in days gone by, are still adapted to the present and prospective requirements of the service.

From time to time many suggestions have been made, but no general interest has manifested itself sufficiently to cause any consideration to be given to the subject. It must be remembered that mere change is not improvement, and that what is now provided is generally the result of practical experience.

It is questionable whether any future necessity will demand that each trooper should carry a lariat and iron picket pin. Ropes are most useful during scouts and raids, but could be provided without having each horse carry the present weight. If a volunteer regiment, with untrained mounts, should go into camp and be misled into picketing out their horses, half of the animals would be ruined with rope burns in a couple of hours. None of the ills to which cavalry horses are subject is more annoying, or requires so much time to heal, as a bad rope burn below the fetlock joint.

After two years use, it is generally conceded that the dimensions of the new bit are not exactly correct. It serves its purpose with all the quiet, well trained horses, but does not answer with those inclined to be fractious, or which are hard mouthed. It is believed

that a little alteration and experiment as to proportions will correct the difficulty.

The opinion prevails amongst thoughtful officers that civilized warfare of the future will call for much rapid work from cavalry. In this case the loads must be reduced, and the first thing which attracts the attention is the size and weight of the saddlebags. The large size of the bags is a temptation to soldiers to overload them with unnecessary articles.

It has been discovered that the blue cartridge belts issued with the new magazine rifles do not hold their color. Inasmuch as these belts are for full dress as well as field use, it should be insisted upon that the dye used should not only be of absolutely uniform color, but that it should be so fixed that no fading will take place. Some men use their belts constantly for drills, parades, etc., while others are on such duties that they only turn out occasionally. The result of poor dyeing will be to exhibit great lack of uniformity at all inspections and other duties requiring the presence of all the men in ranks. It is believed that a little experimental work by the Ordnance Department now will save much complaint later on when the new belts have been issued to all regiments.

It would not be extravagance to provide a dark blue saddle cloth, to be worn over the grey blanket at full dress ceremonies, especially at such posts as Forts Myer, Ethan Allen, Sheridan, Leavenworth, The Presidio and Jefferson Barracks. If this cannot be brought about it would be a good idea to try a few dark blue blankets to test them for appearance and durability, in comparison with the grey blankets. The Ordnance Department is usually willing to make any experiments or changes which any arm of the service unites in recommending as likely to produce good results, provided appropriations admit of it. Instead of asking for a board to consider such things, cavalry officers would do well to make individual experiments upon the various parts of the equipment and uniform, and communicate the results to the service for consideration.

W. H. C.

GERMAN AND FRENCH CAVALRY MANEUVERS.

In "The Autumn Maneuvers of 1894," from the Military Information Division, there occurs the following observations of the German cavalry movements September 11th:

"Early in the day there was a severe rain, and all the troops were wet through, but the weather made no difference with the maneuver. In the charge of Cavalry Division 'A' against the right of the Thirty-Fifth Division, on part of the ground the fences had not been removed, and dismounted men were sent forward to clear the way. One was a three-barred fence, and it took some time to remove the two top bars. As it was in sight and range of the enemy's infantry this would have been difficult, if not impossible, in war. Five horses in one brigade were killed here. One fell into a ditch and broke his back. Four were impaled on the bars of a fence, which, lying on uneven ground, when trodden on by the front rank, were thrown up so as to take the rear rank horses in the breast or belly. Another brigade charged

over some fallen timber and stumps, where several accidents occurred to both officers and men. Their double ranks and lances make maneuvering in such ground difficult and dangerous. But the good training and great gentleness of their horses enables them to get through such ordeals wonderfully well."

The following description of the President's review of French cavalry occurs in the same report:

"After the passing of these auxiliary services, and when they had completely cleared the ground, came the cavalry at a gallop, each brigade headed by its trumpeters consolidated and sounding a charge; these did not leave the column. The formation was in columns of brigades closed in mass, each of these divisions followed by its two-horse batteries in line, also at a gallop, and preserving splendid alignments. The front rank of all the dragoon squadrons carried lances with small pennant; hitherto during maneuvers the pennants had not been used. It could not be seen that any material gain or loss in distances or intervals occurred among the subdivisions of either infantry, artillery or cavalry during the march past.

"Having all passed the reviewing officer, the cavalry column was headed toward the left and again formed into a double line of masses, with the center

opposite to and about 1,200 yards from the President's stand.

"The cavalry alignments were rapidly perfected and the horse batteries grouped on either flank of the combined divisions in line. The seventeen regiments and six batteries then advanced at progressive gaits, headed by General DE GALLIFET, all with sabers drawn, until at about 600 yards from the President, when all took the charge and moved on to within sixty yards of the stand, when they halted by one grand, simultaneous movement at the signals of the officers leading them, bringing all sabers to a present arms. The alignments, intervals, and distances had been exceedingly well preserved.

"There were five regiments of cuirassiers, five of dragoons, six of chasseurs, and one of hussars in that mass. This ended the review and the ma-

neuvers."

THE CAVALRY MANEUVERS.

The cavalry has been coming in lately for a good deal of notice. We have now before us the criticisms on the cavalry drills held recently at Aldershot under Major General Luck. There is no denying that in the past the cavalry has suffered considerably from a want of friends. It is a service which requires to be well in evidence. The more it asserts itself the better will it be respected and cared for, and it is gratifying to see that the public is beginning to comprehend the conditions under which it exists, and to take a more intelligent interest in its welfare. The critic of the Times sums up the wants of the cavalry in these words: "Stronger squadrons, drill grounds to train squadrons before coming to the maneuvers, annual maneuvers," and he adds, "a determined and practical Inspector-General." The last we have got, and the others should not be difficult to obtain.

But this brings us back to the truth, which the authorities seem rather slow to recognize, that not only trained men and horses are requisite if maneuvers are to be profitable, but a full complement of both. That is, however, what we do not possess. As soon as we have an available force capable of carrying out an annual maneuver

with advantage to itself, the arrangement should be made permanent, but as has been repeatedly pointed out in these columns, the first requisite is a perfect and complete force of men and horses. It is useless to advocate annual maneuvers, essential as they are to cavalry training, until we have troops capable of being maneuvered. The concentration of more regiments at Aldershot each summer would at least partially and temporarily neutralize the evil of insufficient drill ground, from which in so many stations our cavalry regiments suffer, but it cannot be too strongly insisted on that the first step toward improvement is to increase the establishment of regiments. Without this no other measures will be of any value.

A depot squadron would seem to be an absolute necessity. There are in every regiment so many men and horses that are from one cause or another unable or unready to go on active service that to include them in the ranks is to introduce an element of weakness, and to court failure. The depot squadron, on the other hand, is an element of strength, as it withdraws from the fighting body everything that is unfit, and gradually prepares the immature for active work. Another matter for reform, closely connected with the foregoing, is the absurd proportion of dismounted men. It is a mistake to suppose that dismounted men are a necessity; their place can and should be supplied by reserve men.

In point of fact all the best opinion appears to be gravitating towards the idea that a distinct corps of orderlies should be formed, and that horse soldiers should thus be relieved of all but their proper military duty. While the efficiency and readiness of the rank and file would in this way be promoted, there ought to be some special training for the officers. Whether it is to be obtained by means of a separate establishment like Saumur, or by forming a special class at Sandhurst, it may be premature to say, but there certainly should be some distinction between the preparation of an infantry cadet and that of one intended for the cavalry.

Another point which has been brought prominently forward of late is the enormous advantage conferred on cavalry by the superior speed and staying power of the horses. It will, therefore, be necessary in the near future to find ways and means of improving our cavalry horses in breeding and style, while at the same time their load must be somewhat reduced. A word may be said in conclusion on the unmeasured condemnation pronounced on this arm by certainly not the most accomplished military critics in the press. We are very liable to go to extremes when once we have begun to find fault, and the spirit which gives rise to that kind of writing should be sternly discouraged. As a corrective nothing could be better than Baron Salvi's friendly remarks, which we reproduced last The truth is that, individually, our men and horses are unrivaled, but there are too few of them. Our duty is, while maintaining our riding drill and individual smartness at their present high standard, to provide for the collective training by which alone this arm can make itself felt on any important occasion.—Army and Navy Gazette.

OUR CAVALRY.

It has been frequently urged that we should copy Germany in the administration of our mounted forces. No doubt, since the Franco-Prussian War, the German cavalry has been raised to a high pitch of efficiency, but as far as management of the stable, manège, or barrack routine is concerned, the Teutonic model offers no particular advantages. The German system, however, of training recruits in batches of about forty men, under the supervision of one officer and three specially selected non-commissioned officers, will put to shame our negligent method of "off-handed" instruction rendered by any drill sergeant who may happen to be available. Many of the duties which fall to the lot of our senior sergeant or corporal are performed by the German officer, and this causes him to take a deep and intelligent interest in the drill of his squadrons; moreover, he is proud to note the progress of the men under his charge. We have much to learn from their system of "silent drill" (which was commendably eulogized by the late Colonel BURNABY), for unnecessary shouting and continued galloping up of adjutants, coupled with the harsh notes of the bugle, and hoarse objurgations of the colonel, are practices unknown in the German army. English adjutant, moreover, we maintain, is allowed far too much power as compared with the squadron officers, and it has also been not inaptly stated that in many cavalry corps the sergeant-major is permitted to exercise very nearly as much authority as a captain. In our opinion, the captain should be allowed more latitude and responsibility of action, not only in the training of men and horses, but also in promotion, reward and punishment. Of course, the foregoing must not be taken as the type of all regiments, for there are colonels who do concede this privilege, and a sensible captain who is up in his work will certainly not brook undue interference. far as subalterns are concerned, we feel tolerably certain that there are few who cannot give points to and beat their Rhineland brothersin arms in all that appertains to outpost duties, patrolling, topography and reconnaissance, and we need have no fear on this score as long as our cavalry regiments are officered by those to whom field sports are as second nature.—Admiralty and Horse Guards Gazette.

THE GERMAN AND FRENCH MANEUVER ARMIES COMPARED.

* * The French took also less pains to screen their guns from sight, while the Germans, if time allowed, would run up a little embrasure, cover the front with grass or straw, according to the crop, and not let a man show his head over the parapet. The same rule applied to the German infantry. In an instant the spades were at work, a trench thrown up, and the work concealed by every imaginable device, while any individual failing to squat quite low down out of sight was certain of prompt and severe reprimand. On the other hand, German troops are not encouraged in advancing to

the attack to seek cover separately; that is the business of captains and commanders of sections. The object aimed at is rapid and continuous advance, the reserve going forward to beat of drum in close order and sometimes in that "parade march," which in the matter of muscle exercise is so highly valued. The French system of attack is not dissimilar—always on the move, line pushing forward line, but much looser. One of the more remarkable things about the Germans would appear to be the extreme quietness in the ranks. Every man is so trained that he knows what to do. There is no excited shouting out to this one or that to lie down, or right incline, to close in or open out; no aides-de-camp gallop about with contradictory orders; all is method and system. The same silence is not found in the French ranks. There are, however, few words of command in extended order; the whistle does everything. The Germans have discarded volley firing. What may be saved in ammunition is lost, they think, in the desire to produce a good volley, and the nervous waiting for the command, "Fire," after the sights have been aligned with the object. Independent firing is invariable, although frequently restricted to named files, and especially to marksmen, who wear a braid badge from chest to shoulder. The French. on the other hand, fire volleys, except at point-blank range, and their fire discipline is good. Neither army will have anything to do with flag signaling. The Germans make but a very limited use of the bicycle, while the French employ it largely. Stretcher bearers were not organized in either maneuver army, but the French ambulances were excellent. Every effort is made in both services to prevent any avoidable reduction of the fighting line, which is in England so terribly attenuated by extra regimental and half independent services. There was no attempt even to provide the men with water by means of horse barrels.

As regards the cavalry, what the French gain in better horseflesh they lose in riding and dash. The German ublan is well known, but all descriptions of their cavalrymen carry the lance, the pennon being furled while reconnoitering. The French horse soldier still wears the baggy leather overalls said to have been invented by Marshal Lasalle, and they give him a clumsy appearance both in and out of the saddle-very different to the German. The German work is almost wholly by squadrons, even in the charge, and the effect of squadron after squadron coming on has an undoubted influence upon opposing infantry. When forty squadrons charged the infantry of the Third Army Corps near Stettin it appeared terrible to one standing with the latter. German cavalry charging German cavalry go right home into the opposing line, and are ordered by the drill book to charge through infantry if it can be done with safety, and in any case only to wheel at the very last moment. There can be no doubt that both French and German horses are more highly trained and docile than ours. In the German army this may come from overwork and poor food, but with the French their horse condition was splendid.

The Germans had two captive balloons at work - one of the or-

dinary type, the other of the elongated pattern - at a height of 400 metres, an officer working the telephone to the detachment. The French had one ordinary balloon. But, apart from the moral effect, the general opinion is that balloons are of comparatively little value save in the most favorable atmospheric conditions; the oscillation in the slightest wind is tremendous, and mistakes are easy unless the country is thoroughly known. We have reserved to the end the answer we have obtained to the great question of the discipline in the two armies. In the German service it is perfect-rigid, unbending. The officer lives, eats, works, and, for aught we can gather to the contrary, sleeps, tightly buttoned up, begloved, his sword on, a picture of military precision. He is forever saluting or returning salutes. He knows no ease, no relaxation—is the officer, and nothing but the officer, the twenty-four hours through. Respect for him there must be on the part of the rank and file-love is another thing-and the outward signs of it are never relaxed, omitted, or forgotten. The French officer, on the other hand, is a bon enfant. His sword is an instrument for parade, and he takes it off the moment he can, unhooks it when skirmishing or if it is in his way, rarely wears it in the street, and does not trouble much about gloves. There is saluting, but it is more or less fitful, and very different to the smart and respectful attitude of the German. It is also easy to see that it is more or less grudgingly given. There is probably much more rapprochement on the part of the French soldier toward his officer than in the German service. The difference in social rank is less marked, but it is accompanied not infrequently by reply, observation and familiarity from the ranks. The sergeants sometimes find it very difficult to maintain their position and authority among privates, many of whom have easy means and are people of importance in their native districts. It is also open to question whether the presence of these, if of a leveling character, does not give rise to some discontent among their ordinary comrades, who think themselves placed at a disadvantage in the matter of food and duty, and to some extent the suspicion is possibly well founded.

But to the credit of the whole profession of arms it must be recorded that none of the foreign officers who attended the German maneuvers, and none of those who attended the great French assembly, witnessed any drunkenness or disorderly conduct on the part of any soldier.—Army and Navy Gazette.

AUSTRIAN CAVALRY.

The strength of an Austrian or Hungarian squadron of cavalry, apart from non-combatants, is nineteen officers and non-commissioned officers and 130 men—that is altogether 149 sabers. The troops engaged at this autumn's maneuvers were at their full peace strength, which is only one officer short of their strength in time of war. At the Kisczell review, therefore, there were present no fewer than

10,579 cavalry. These, with the artillery train and other services, represent fully 12,000 horses on the field. There were also present a total of 15,000 infantry, partly of the Line and partly Honveds. The engagement between the two great hostile bodies of cavalry, which it was supposed would take place at Zenta, really occurred in the neighborhood of Kisczell. A wrong report of the place of battle appears either to have been given out on purpose, or alterations were made in accordance with the marching and galloping capacity of the troops. For, to show the strictness of the system pursued, not even the name of the officer in command of the eastern force was known to that of the western half, or vice versa, before the actual encounter took place, the object being to prevent any conclusions being drawn as to the strength of the enemy. The fight took place half way between Kisczell and Papocz, and is described as the most brilliant affair imaginable. The battle, it was ultimately ruled by the umpires, remained undecided. The Emperor, who rode his favorite chestnut mare, Quickstep, an English thoroughbred, went over a great deal of ground, galloping from one part to another, until the "cease fire" was sounded. His Majesty expressed great gratification at the admirable condition in which he found both horses and men after a long and exhausting march. There were several innovations introduced in the operations for the first time. Thus there were trials of new quick-firing guns carried on the backs of two horses; then, again, the infantry, when quick marching, left behind them their knapsacks and greatcoats, which were brought on afterwards by light wagons; but the principal thing was the reconnoitering and rapid movements of the cavalry, and in this respect the expected result was fully obtained. After the review 2,200 horses and 5,100 men were entrained between the afternoon and 6 o'clock next morning, whilst 10,000 horsemen started to ride in different directions to their several garrisons.

The operation of throwing troops across the river at Zenta. which was performed in various ways in the presence of the Emperor Francis Joseph, on Saturday last, afforded a spectacle of much interest, for not only were all the usual methods of crossing employed, but several new inventions were also tried. The troops thus conveyed from the left to the right bank of the Theiss consisted of two regiments of hussars, one mounted battery division with twelve guns, and one battalion of engineers. The river at the spot chosen for these experiments is about 650 feet wide, with a depth at the center of about twelve feet. An army between the Theiss and the Danube was supposed to be on the retreat to Buda-Pesth and pursued by another army marching by the Maros Valley to the river The two regiments of hussars, with detachments of infantry and artillery, were first sent out in advance for the purpose of reconnoitering and then throwing a bridge over the river by which the approaching army might pass to the opposite bank of the stream. The other bank was supposed to be still held by small bodies of the enemy, intent upon delaying the crossing of the pursuing force, all the permanent bridges being destroyed and all means of transport taken away.

Rapidity of action being the primary aim, it was resolved to bring over the two regiments of hussars, the artillery, and the rest of the force by provisional expedients, and only after the position on the right bank was secured, to lay down the bridge in the usual way. Scouts swam over from bank to bank, exposed to the hostile fire, and several spots were tried until the best was found, when the different appliances, old and new, were made use of. Light canvas boats, like those quite recently used during the German maneuvers, were employed, but no bridge was formed of them with aid of stakes and planks, as they were supposed not to be available for that purpose. Water-tight haversacks of the ordinary size were employed, which, when emptied of oats, were quickly filled with straw, hay, and so forth, and they were so bound together as to be waterproof. Four such bags were, with the help of three sabers, combined into a raft on which five men could sit in riding fashion, the first of them provided with a pole to steer, while the horses were led swimming. On each side the preparations took exactly eight minutes, and the crossing eight minutes. This, with two minutes allowed for resaddling and mounting, makes eighteen minutes for five cavalry soldiers to ride away fully equipped on the opposite bank of the river. Another batch tried the air-tight inflated bags, rather larger than the former, six of these being united into a raft. This, with planks laid over it, was steered as in the former case. Another experiment was the formation of regular boats for twelve or fourteen men with arms from the haversacks, stiffened with iron bars or by a sufficient number of cavalry swords. These boats were also formed out of eleven inflated air bags, and the guns were brought to the other side by one available pontoon hanging on a steel wire, and crossing to and fro. Another experiment was sending over horses in groups of thirty-five or forty at a time. The animals were led into the water by men swimming on the inflated air bags until deep water was reached, when the men returned to shore, and the horses, seeing others already on the opposite bank, swam over without hesitation. By all these different means the two hussar regiments, the artillery, and the infantry, were all taken to the other side within three hours. The opposite bank being now supposed to be secured, the throwing over of a real bridge was dispensed with.

The Emperor then held a review of fifteen and a half squadrons of cavalry, together with infantry and artillery. The spot where these operations were carried out was the same where in 1697 no fewer than 20,000 Turks were slain and 10,000 more driven into the Theiss and drowned, within two hours, by Field Marshal Prince Eugene, who was then only thirty-two years of age. The Emperor and the troops had that event constantly in mind, since the throwing of a bridge over the Theiss was then as now the turning point in the operations, and as the cavalry decided the battle in the way that dismounted dragoons stormed the Turkish ramparts built for the protection of a bridge, and that the riders, swimming over the

river and making use of several sandbanks, suddenly appeared in the rear and caused a panic in the ranks of the Turks, who at that time were commanded by Mustapha II. and his Grand Vizier.—
Army and Navy Gazette.

MILITARY OFFICERS: PAST, PRESENT AND FUTURE.

We may assume it to be axiomatic that the excellence, or otherwise, of any army as a fighting machine-its proper vocationdepends upon the excellence, or otherwise, of its officers. The very recent examples of either aspect of this question, afforded during the late Chino-Japanese War, furnish us with the most significant of illustrations. No one acquainted with the aptitudes and firmness of the rank and file of Chinese troops can doubt but that, when well commanded—being also well armed and equipped—they are cal culated to give a good account of themselves. Of any intuitively great commander in whom the promptest military sagacity, or coup d'æil, is a gift of genius, it may certainly be said — miles nascitur non fit; but, between even such a born leader and the ranks—in these days of highly scientific resources, when the officers in every army worthy of the name have become so much more cultivated than heretofore, it is unquestionably indispensable that the officers of all grades should be thoroughly imbued with general knowledge, and technically trained in military science, administration and evolutions.

Now, within the last thirty-five years, the organization, exercises and general conditions of the service, in our own little army, have undergone a complete revolution. The late Prince Consort, who, no doubt, derived a good deal of inspiration from the Prussian model at that time the best concerted in Europe and in the world-was amongst the first to point out the defects of our system, and to give an impetus to improvements, which, although they shortly afterwards came to be taken up with zeal and earnestness by one after another of the more sagacious military minds, then met with but scant encouragement, either from the profession or from the successive state administrations. But, thereupon, succeeded firstly, the lamentable spectacle of our shortcomings in the Crimea, to be shortly afterwards accentuated by the Indian Mutiny, gradually leading us up to what we may term the CARDWELL era. To the Prince Consort we had become indebted for the institution of training camps, to Lord CARDWELL for complete reconstitution of system, notably in the preparation and appointment of officers, which, of necessity, passed on to improvements in the condition and discipline of the rank and file. Preparatory, sound and complete general education, followed by competitive special examinations for the qualification of candidates for commissions, following the abolition of the purchase system and selection through influence and patronage, introduced young officers of totally different cultivation, aptitude, tastes and habits into the service; in which, moreover, they were immediately subjected to much more careful and complete technical training in

strictly military duties and exercises, whether in quarters or in the field; whilst the training camps and annual maneuvers in combined bodies—not mere regimental parades and drills—prepared themfor the necessary concerted tactical action in the movements of troops in actual hostilities. It was no longer a jeunesse dorée, whether of rank or wealth, exclusively, that supplied our army with regimental officers, and who, many of them, treated or went through their routine duties in a sort of yea-nay, perfunctory way, rather as a bore than as a study, and every earnest occupation as irksome; but mostly young men of cultivated tastes and acquirements, with a keen relish for their professional and other intellectual and invigorating athletic exercises. Such are the men by whom our army is officered now, as compared with those by whom it was officered before the CARDWELL era; and whether or not the system be calculated to incite military genius to brilliant strategy or tactics, or both, and thus to bring about such master-strokes as Plassey, Assaye, Waterloo, Meeânee, Sobraon, Sadowa or Sedan, and so forth, it is calculated to furnish the essential components in detail of armies upon which great commanders can implicitly rely to accomplish such achievements; and what is equally important, it contains within itself all the elements of progressive improvement.

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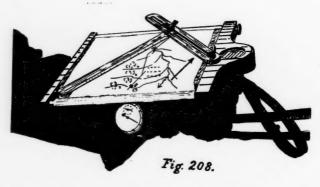
There is also another point deserving of consideration with reference to the higher general, as well as the more careful technical education of officers, and it is this: the progress of compulsory popular education has developed—amongst those who fill the ranks -a whole class of men themselves sufficiently instructed to be intelligent observers, if not critics, of the capacities or the incompetence of their officers - so that the due authority of the latter over their men, and the respect and esteem - promoting confidence, which is everything-which they inspire in their men, and upon which good discipline and consequent efficiency chiefly depend, can only be assured by officers whose superior qualifications are manifest. For the like reason it is that many of the antiquated evolutions, drills, regulations, and so forth, have been swept away, as not only wearisome, but even embarrassing; and the technicalities of the service throughout have been rendered more consistent with the aptitudes of officers whose keener intelligence has been exalted by better culture and more utilitarian training; whilst the habits and pursuits of officers -- in proportion with a higher tone of tastes -- and their devotion of leisure either to healthy sports and pastimes, or to pleasurably useful studies, have been purified of the pernicious mixture of blank, languid sloth, vicious indulgence, and other practices which used, formerly, to be resorted to for the relief of ennui-in India especially - and which too often culminated in the utter ruin of many and many a subaltern. The frightful amount of reckless gambling which used to be the prevailing recourse-to make away with weary, vacant leisure, but too frequently resulted in the most discreditable expedients or artifices to obtain money required to discharge so-called "debts of honor" arising out of "blind-hookey,"

etc.—has, to say the least, become quite exceptional. Whereas, such were the leisure pursuits, heretofore, of a large proportion amongst the subaltern officers of marching regiments and of crack corps of cavalry; that is, amongst young officers whose antecedent cultivation and associations had rendered their repertory of rational recreation a blank. Amongst officers who had worked out their positions, whether at Sandhurst or Woolwich-that is, who had acquired a taste for the study of their profession (as large numbers of officers under the new regime have done) - in the course of their antecedent education, or who had enriched their minds to qualify for the scientific branches of the service, the failings in question were rarely, if ever, noticeable; and, latterly, they have almost disappeared from messes and from officers' quarters. On the other hand, it would, we believe, be incorrect to affirm that young officers now are less extravagant in other respects than they formerly were; on the contrary, indeed, the spirit of ostentation, which is a prevailing vice throughout latter-day society, is transported with them, by young officers, into the service, in competition with each other. It may be interesting, however, to scan a more remote retrospect of our military history, because, with all one's admiration for superior culture, one cannot deny that British soldiers accomplished such great victories as those of the Netherlands, under Marlborough, when many officers were little, if at all, better educated than any illiterate country boors of fifty years ago, and when we had no standing army, and our forces consisted of a mere militia. And as our standing army dates back only to Walpole's time-say, little more than a century before the CARDWELL era—and during that time we have held our own in a gradually expanding Empire, and throughout protracted wars and many a critical campaign, whereas we have had no adequate opportunity of testing the superiority and the efficiency of our new (or second) period and system of military organization and training of officers, we are not quite justified in assuming that we have actually enhanced our prospects of victory in case of serious conflict. must be admitted that, in most cases in which our arms have been triumphant, the secret of such triumphs has to be sought in the peculiar Anglo-Saxon pluck and persistence which inspire British soldiers with a predetermined certainty of success, a characteristic which was well expressed by Napoleon at Waterloo, when he petulently exclaimed, "Confound those English! They don't know when they are beaten." It is very well to instruct a young officer how to provide for all the emergencies of camp life, as well as in rifle shooting, outpost duties, reconnaissances, the construction of field works (or entrenchments); but all that will not necessarily endow him with the verve of preassured victory. The difference was laconically and forcibly put by Lord LAWRENCE when he somewhat sarcastically addressed the general in command, near Delhi, who was entrenching his camp instead of hastening to the assault, in the brief dispatch, "Clubs are trumps, not spades!" With all these reservations, however, the fact still remains that, given equality of natural intelligence, the young officer who has first been thoroughly well and

diversely instructed at school, who has next had all his technical military duties and exercises carefully inculcated after joining his regiment, and who has, lastly, been well familiarized with life and movements in the field, in a camp of instruction and periodical maneuvers of collective forces, will have acquired more of the capacity to make a good regimental officer, and, afterwards, a good commander, than one who has not had the benefit of such advantages; and now, as latterly and henceforward, it has been rendered obligatory upon every officer that he shall be familiar with all such acquirements, experiences and tests of his intelligence, practical knowledge, skill and endurance.—Admiralty and Horse Guards Gazette.

A RECORD OF EXPERIENCE WITH THE FIELD SKETCHING CASE AT THE INFANTRY AND CAVALRY SCHOOL.

The field or cavalry sketching case, as it is familiarly called, is a device for use mounted whereby an intelligible sketch of a road and adjoining country may be quickly made. The original case was but an adaptation of an old style plane table with its rollers for carrying the paper; from this origin it has developed somewhat until now, as made at Frankfort arsenal, it appears nearly in the form shown in cut.*



The sketching case is intended merely as an aid in certain varieties of rapid work, and is seldom used where time and more accurate means are available.

There is no question but what the exact instruments would be used in military map making if time and circumstances permitted, but in making a rapid reconnaissance with report of the route traversed it is very evident that instruments must either be entirely dispensed with or be of the simplest character. Any one, with a

The new regulations, par. 461, require the Engineering Department (corps of engineers) to furnish sketching cases, and it is understood that bids for them are now being invited.

little technical knowledge, accurate instruments and plenty of time, can make a fairly exact survey, but the difficulties begin to multiply as soon as the time becomes shorter and instruments fewer.

To be at all successful with the sketching case one must be perfectly familiar with the construction of scales, with the principles of contouring and with plane table traversing.

To be skillful he must be a good judge of distances, slopes and heights and at the same time cultivate what is called "a good eye for country," that is, be able to see and appreciate the fact that he is passing a watershed, a valley or a good defensive position, as well as being able to take in the general features of the entire plot.

To illustrate a use of the cavalry sketching case, suppose, for example, a division of our army, say 8,000 men, is approaching Fort Leavenworth from the east, and when two days' march distant word is brought to the division commander that a slightly superior force of the enemy is approaching from the west but is still three days' march distant from the post. Our division commander knows nothing of the topography around Fort Leavenworth except what the county maps give and his orders are to hold the place at all hazards. He at once sends forward certain officers (this detail may fall to any lieutenant) to reconnoiter, sketch and report upon the country lying to the westward of Fort Leavenworth, with a view to defending the post. The command being still two days' march to the east, the officers detailed for the reconnaissance ride through in a day, so that when the work commences our army is but a day's march to the east. Arriving at the post the senior officer of the detail carefully studies such maps as he may have and obtains all other information available; he then assigns an approximately equal share of work to each so as to cover as much of the country as his judgment tells him is necessary.

To be of any avail the report must be made to the division commander on his arrival that evening, so that dispositions for defense may be made at once. The sketching case is the only practical means of solving the problem. The field work, in so far as bearings, distances and outlines are concerned, being done mounted, while the finishing of the sketches is done in colored pencils after returning to the post. Defensive positions must be located and sketched, together with all roads within a radius of six or eight miles; the usual report, whether of a road or of a defensive position, being attached to the map.

The problem outlined above was solved by a class of student officers at the Infantry and Cavalry School. It involved the sketching of three positions, each about a mile in length, and four roads, varying in length from five to ten miles. These sketches, covering fifteen square miles of country, were completed within seven hours, and most of them were sufficiently accurate to have enabled the supposed division commander to have moved intelligently on the various roads, to have placed outposts at the proper points, and to have secured the best defensive positions during the night.

Thus far the two longest road sketches completed in one day (nine hours) by a class of forty officers were of eighteen and nineteen miles respectively, the latter involving a ride of twenty-four miles. The best twelve of these latter had an average error in distance of but 210 yards, and in direction of less than three degrees.

Of 328 road sketches made with the sketching case (all in fact for which accurate data is at hand) there is found to be an average error in distance of seventy-five yards per mile, thus showing the uniformity in the gait of the average horse. The bicycle, as a distance measurer, far surpasses the horse in accuracy, but it has other drawbacks to which the horse is not liable; for instance, the metal affects the compass; stopping an instant to sketch or make notes is impossible without dismounting; leaving the road to get a view from an adjacent hill is out of the question, except on foot; mud and also a frozen, lumpy road are abominations; the point of view is possibly four feet lower than from the back of a horse (not an unimportant consideration); and finally, the rider must work his own passage. A nervous, excitable horse is, however, almost useless for this work, so that there are disadvantages in both means of locomotion.

As to scale, the simplest is the walk, counting alternate steps; the most accurate has been found to be the trot, although a time scale (with stop watch) of walks or trots has been used by several, with excellent results.

W. D. B.

BOOK NOTICES AND EXCHANGES.

THE DECLINE AND FALL OF NAPOLEON. By Lord Wolseley.

This book seems to have been written as a popular account of the campaigns of 1813-14-15, without the close analysis and careful attention to detail that would give it a military value, such as we would expect from one with the literary and soldierly reputation of the author.

It must be confessed that the general tone of English books on this subject is not free from prejudice. They laud the acts of Wellington and they even praise the subordinates of Napoleon whenever it is possible to make it appear that the former were right and that the master was wrong. The author accepts these statements rather sparingly, and with great candor acknowledges that it was only by good fortune that the British army saved itself from defeat at Waterloo.

Some inconsistencies might have been avoided by a more careful reading of Ropes, for although the author pays a high compliment to that writer, we are sometimes forced to suspect that he has not read the American work. For instance, it is reasonably sure that Wellington and Blucher had no mutual understanding as to the plan of campaign in 1815, as stated. It is strange that anyone who has read Ropes should expose himself to the merciless showing up that is made of those critics who speak of the Waterloo reminiscences of Wellington as full of "mistakes," while those of Napoleon are called "untruths"—the former having every chance to get correct data, and the latter a prisoner with nothing. In placing the blame for the failure of the brilliant plans of Napoleon in his last campaigns upon the physical deterioration of the man, we are given a familiar theory which those who have read the proof do not often accept. A hasty examination of Baron Larrey's Memoirs and those of the valet of Napoleon does not seem to add to our knowledge on this point. How can a military critic, with the Bertrand order before him, not to speak of Ropes' resistless logic, make such a statement as that Grouchy would have disobeyed his orders by joining Napoleon by the bridge of Moustier? The military reader, who is able to explain these views of the distinguished author by the natural excuse of a fair difference of opinion, will be still more puzzled when he finds Desaix mentioned as one of the leaders of the Russian invasion.

The book is marred by careless editing, such as the map of Waterloo reversed, incorrect spelling of proper names, as "Pirck" for "Pirche," "Fleuras" for "Fleurus," "Mouster" for "Moustier," and the odd spelling of Lewis as the name of a King of France.

Praise of Ziethen for his defense of the Sambre is somewhat weakened by the criticism that he should have destroyed the bridges before retiring. Really that achievement seems to be a poor example of the action of a delaying force, compared with the performance of many others in a later day, as for instance that of Lieutenant-Colonel von Pestel at Saarbrücken, or others during our own war.

It must be confessed that many good authorities justify the statement that the French troops at Waterloo were excellent, while those of Wellington and Blucher were poor. The proofs of these statements are not entirely satisfactory. We know that the cavalry at least was destroyed in the Russian invasion; Lord Wolseley expressly states that it was poor in 1814, and Napoleon said the same, and it is known that the greatest difficulty obtained toward the last in France in supplying horses for the army. How then could the cavalry of Napoleon blossom out in a few months so as to be called "magnificent?" In my humble opinion, the great victories of the last three years of his career were made ineffective and barren of result because of inefficient cavalry. That was why Bautzen, Dresden and Ligny were not ranked among his greatest victories, and that was why he was finally overwhelmed.

Gustavus Adolphus. By Lieutenant-Colonel Theodore Ayrault Dodge, U. S. A. Houghton, Mifflin & Co., Boston, 1895.

Military students will be grateful to Colonel Dodge for this excellent work. It is the fourth volume of the "Great Captains" series, and is not merely an excellent biography of the Great Swede, but is a comprehensive history of the Art of War from its revival after the Middle Ages to the close of the War of the Spanish Succession.

Among the many great military leaders who have carved their names in history, the preëminent generals who displayed a mastery of the science of war are so few that they can almost be counted upon the fingers of a single hand. According to Colonel Dodge they are Alexander, Hannibal, Cæsar, Gustavus, Frederick, and Napoleon. It may, perhaps, be well claimed that Epaminondas, the father of generalship, is entitled to a place in the list, and that the names of Marlborough and Prince Eugene should not be omitted; but there can be no doubt as to the rightful claim of those whom Colonel Dodge selects to the title of Great Captains.

Of the great captains mentioned none, perhaps, placed the stamp of his genius so plainly on every branch and feature of military art

as Gustavus did. The infantry, which he found cumbersome and unskillful, became under him mobile, flexible, and an engine of mighty power. Instead of retaining the old "battles," thirty or forty ranks deep, he reduced his infantry to three ranks, lightened the musket so that it could be fired without a rest, introduced the paper cartridge, organized companies and regiments, and, in brief, gave the infantry an enormous advance in its two great essentials of mobility and fire action. The cavalry no longer depended upon its feeble fire action with its primitive pistols, but was taught by him to charge home with the saber, and to overthrow the enemy by the force of its shock. The artillery was lightened, its cumbersome inertia was changed to mobility, and the invention of fixed ammunition enabled it to fire eight shots where the infantry could fire but six. A corps of sappers and miners was organized, and every man of the army was trained in the construction of field fortifications. The army was clad in uniform clothing, and wonderfully disciplined. Unlike the hordes of licentious ruffians who composed the armies of his opponents, who subsisted on plunder, who converted the theater of war into a hell, and who violated every commandment of God and all the laws of man, except a few military regulations, the soldiers of Gustavus were essentially an army of good morals. Divine service was held regularly, loose women were forbidden to accompany the army, and last, though by no means least, the pay of the army, though small, was certain and regular.

It is pleasing to read of a champion coming to the relief of the unfortunate, and by the force of his valor and ability overthrowing a great enemy in the moment of his triumph. Whether it be the fabled succor of Andromeda by Perseus, the arrival of the fleet of Gylippus in the harbor of Syracuse, or the timely appearance of the Monitor in Hampton Roads, the narrative always gives a thrill of satisfaction to the reader; and nothing in history is more dramatic than the coming of Gustayus to the relief of Protestant Germany, lying bleeding and prostrate at the feet of Tilly and Wallenstein. The "Snow King," the Imperialists declared, "will soon melt away:" but Leipsic and Lützen soon showed that the melting was on the part of his foes. No general of the Imperialists was a match for the Great Swede. Tilly, a brutal, Blücher-like man, who replied to the remonstrances against the licentious crimes of his men that his soldiers were not nuns, was a good, sturdy fighter, but, as Colonel Dodge well says, "he suffered from strategic myopia." Wallenstein, the mysterious astrologer, dark, unprincipled, popularly supposed to be in league with the Devil, possessing great military merit, forceful in character, and wielding boundless influence over his army of cut-throats and blackguards, was neither the equal of Gustavus as a strategist nor as a tactician. Gustavus, in fact, was the first general of modern times to appreciate the principles of strategy, and his two great victories of Breitenfeld (Leipsic) and Lützen gave evidence of his consummate tactical skill. As a statesman he was as great as he was in arms. No general more clearly understood the influence of political considerations on military

operations, and to the censure that was passed upon him in some quarters for his failure to march to the relief of Magdeburg when that unhappy city was besieged by Tilly, Colonel Dodge well replies in the following words:

"Putting aside politics—in this case John George with his 40,000 men—the military problem could be readily solved. Three or four stout marches by way of Dessau, the destruction there of Tilly's force, the building of a bridge-head to preserve his line, and the summary attack of the enemy besieging Magdeburg, were among the possibilities. But if we assume that Gustavus' duty was merely a military one, and that he was bound to disregard all political complications, we can scarcely imagine his pushing far into the tangled network before him. All great soldiers have succeeded because they made politics subserve their military scheme; and so did the Swedish monarch. We may imagine the bold and rapid advance which some historians have told us it was his duty to make, to redeem his pledge to Magdeburg; we may picture its success; but we shall have created a paper campaign, and a paper hero; we shall not have depicted the Gustavus who saved the Reformation in Germany, and who was the father of modern war. Gustavus was not great because he was either cautious or bold; he was great because he knew when to be cautious and when to be bold."

The great battle of Lützen brought to Gustavus both triumph and death; and in such fear was he held by his enemies that, notwithstanding the rout of the Imperialist army, the loss of its entire artillery, the possession of the field by the Swedes, and the retreat of Wallenstein into Bohemia, the result of the battle was sufficiently pleasing to the Emperor to cause him to order a Te Deum to be sung in all his churches.

As to the character of Gustavus, nothing can be more clear and satisfactory than the words of Colonel Dodge:

"To an uncommon breadth of intellect Gustavus joined the well-poised knowledge of the apt scholar and the iron will of the true soldier. Once convinced that he was right nothing could bar the execution of his project. He was of a quick, sensitive—one might say touchy—habit, coupled, as is rare, to a deep feeling for right, truth and religion. His quick temper was but superficial; at heart he was kindly, charitable and patient. His piety was honest, outwardly and inwardly, and impelled him to fair dealing and uprightness. Religion was never a cloak. He read daily and at length in his Bible, and prayed as openly and unreservedly as he spoke. He was fond of reading, well acquainted with the classics, and studied keenly the works of Hugo Grotius. He once, however, said that had Grotius himself been a commanding general he would have seen that many of his precepts could not be carried out.

"Gustavus spoke eloquently, and wrote easily, and with a certain directness, which in itself is the best style for a clear thinker. His hymns are still sung among the country folk of Sweden with the fervor in which the people

shrine his memory.

"Condescending, kind and generous, Gustavus was often splendid in his rewards for bravery and merit. When, in his youth, the later Field-Marshal Ake Tott performed some act of signal gallantry, the king thanked him before the whole forces paraded under arms, ennobled him on the spot, and with his own hands hung his sword upon him. But Gustavus was equally summary and severe. Once, on complaint being made of marauding by Swedish soldiers, the king assembled all his officers and severely held them to task; then going into the camp and seeing a stolen cow in front of the tent of a petty officer, he seized the man by the hair and handed him over to the executioner. 'Come here, my son,' said he; 'better that I punish thee than that God, for thy sin, visit vengeance on me and the whole army.'

"While singularly quick tempered, Gustavus was eager to undo a wrong he might commit. 'I bear my subjects' errors with patience,' he said, 'but they too must put up with my quick speech.' He condescended often, at times too much, but no one was ever known to take advantage of his affability. Every one in his presence felt the subtle influence of greatness; his meed was the hearty respect of all who approached him.

"Except Alexander, no great captain showed the true love of battle as it burned in the breast of Gustavus Adolphus. Such was his own contempt of death that his army could not but fight. When the king was ready at any moment to lay down his life for victory, how should not the rank and file sustain him? With such a leader a defeat like Tilly's at Breitenfeld, or Wallenstein's at Lützen, was not possible. Nor was his courage a mere physical quality; his moral and intellectual courage equaled it. Hannibal's march into Italy was but one grade bolder than Gustavus' into Germany; Cæsar's attack at Zela was no more reckless, if less matured, than Gustavus' at the Lech."

If space permitted, the temptation to review Colonel Dodge's description of the campaigns of Cromwell, Turenne, Condé, Marlborough, and Eugene, would be irresistible. Suffice it to say that his descriptions are accurate, his comments able, and his conclusions sound. Exception, may, perhaps, be justly taken to his estimate of the relative merits of Marlborough and Eugene, and not all military students will agree with him in the slight esteem in which he holds the great march of the former from the Low Countries to the Upper Danube, which resulted in the junction of his forces with those of Eugene and led to the decisive victory of Blenheim.

In conclusion, it must be said that Colonel Dodge's book is thoroughly good, and is worthy of a place among the best military and historical works.

ARTHUR L. WAGNER.

THE VIRGINIA CAMPAIGN OF 1862 UNDER GENERAL POPE.

This is the title of the valuable collection of papers read before the Military Historical Society of Massachusetts, relating to special phases of the Civil War indicated in the title. It comes as a gift to the Cavalry Association, from the society, whose good work in collecting and publishing such papers should be appreciated by all students of military history. It is such books as this that will guide the student and give many side lights not found in the cold but invaluable records of the Rebellion.

The work is edited by Theodore F. Dwight, and contains the following: 1. General Halleck's Administration, 1862, by General Samuel M. Quincy, U. S. V.; 2. The Campaign of General Pope in Virginia (first part), by Colonel Charles P. Horton, U. S. V.; 3. The same (second part), by John C. Ropes, Esq.; 4. The same (third part), by John C. Ropes, Esq.; 5. The Twenty-Seventh Day of August, 1862, by General George H. Gordon, U. S. V.; 6. The Battle of Chantilly, and a Revisit to the Field, by General Charles F. Walcott, U. S. V.; 7. Strength of the Forces Under Pope and Lee, by Colonel William Allen, C. S. A.; 8. The Case of Fitz-John Porter, by General Stephen M. Weld, U. S. V.; 9. The Conduct of General

McClellan at Alexandria in August, 1862, by Colonel Franklin Haven, Jr.; 10. The same subject, by General Stephen M. Weld, U. S. V.; 11. Review of the Reports of Colonel Hanen and General Weld, by Colonel Theodore Lyman, U. S. V.; 12. The Conduct of Generals McClellan and Halleck in August, 1862; and the Case of Fitz-John Porter, by Colonel Thomas L. Livermore, U. S. V.; 13. The Hearing in the Case of Fitz-John Porter, by John C. Ropes, Esq.; 14. The Battle of Cedar Mountain, August 9, 1862, by General George L. Andrews.

MILITARY LETTERS AND ESSAYS. By Captain F. N. Maude, R. E. Hudson-Kimberly Publishing Co., Kansas City, Mo.

This is the first volume of the International Series, which is edited by Captain Wagner. Captain Maude has long been justly celebrated for his descriptions of British and European troops, especially those relating to the practical work in the field. The volume now issued contains the cream of his letters and essays, and through them a fair estimate may be made of the spirit of different armies, the method of training in use in each, and the degree of efficiency they may be expected to develop on active service.

Captain Maude correctly says: "Armament and skill on the part of leaders being equal, victory, under all conditions of improvements conceivable in weapons, will ultimately remain with the best disciplined troops, and by discipline I understand that quality which is measured by the endurance of loss by troops under fire, having due regard, of course, to circumstances of time, ground, and em-

ployment under which the losses were inflicted."

In one of the essays on German Cavalry Maneuvers Captain Maude says: "Think what might we not accomplish with our very decided superiority in material, both of horse and man, if only we could condescend to step out of our shells of insular prejudice and adopt a system which is not by any means only German, but which may be said to obtain in the conduct of every civilized business throughout the world except in our army, viz: the decentralization of authority, and the giving to every man according to his rank full power to make the most of what is in him and in the men under him." To know that this opinion is very general in the regular army of the United States it is necessary only to engage any officer in conversation on the subject.

If the volumes to follow contain as much interesting and profitable reading as the first one, there can be no doubt as to the success of the International series.

CATECHISM OF OUTPOST DUTY. Wagner. Hudson-Kimberly Publishing Co., Kansas City, Mo.

The success which attended the publication of Captain Wagner's book, "The Service of Security and Information," has induced him to prepare the present little volume, which is an abridgment of the larger book. The scheme of the Catechism, as its name indicates, is to present to the student the whole subject of outpost duty—including advance and rearguards—in the form of questions and answers. It will prove especially valuable to officers preparing for examination for promotion, and is also exceedingly well adapted for instruction of non-commissioned officers.

W. H. C.

CAPTAIN KING'S BOOKS.

The library of the Cavalry Association has received from time to time books from the pen of Captain King. They have not been reviewed in detail, perhaps, because the numerous editors have thought that King, being one of "ours," needed no encomiums at the hands of brother officers. It is not practicable, at this time, to pass in review all that has been done for the army by this author, but a few words will not come amiss in a journal devoted to the interests of the cavalry, which has borne such a prominent part in many of his books.

Criticisms are sure to follow whenever anyone attempts to write about things we are all familiar with, but from the day when the "Colonel's Daughter" appeared in our midst, till now, no one has rendered such service to the army as Captain King.

He has had the American people for his audience, and before this great court of public opinion he has made his argument. No writer before him has ever appealed so successfully, for he has laid bare the lives of the present military generation, with only such exaggeration as appeared necessary to complete his stories and cause them to be read. We can readily forgive him for introducing some characters a trifle unfamiliar to us, for no one can peruse his books without learning to love our regulars on the frontier, and to see that, above all their laughable oddities, rivalries and occasional displays of unkind traits, there rises into prominence the fact that no other life in America developed or contained more of true sentiment, manly heroism and loyal friendships than that led by our army in the West during the period of its isolation and while engaged in incessant Indian warfare.

In his stories of military life Captain King ranks second to none, and it is hard to read his books without feeling stirred by emotions which seem to rise only in the perusal of probable stories of possible human beings.

His stories are not all of the frontier, for "Cadet Days" and "Between the Lines" present West Point and the Civil War period in an unexampled way. But after all these years of successful literary work, Charley King can well feel proud of the fact that he has no cause to blush for his first efforts, "The Colonel's Daughter," "Marion's Faith," "Kitty's Conquest," and may we not add "The Trials of a Staff Officer."

That he deserves and has received the gratitude and good wishes of his old comrades for giving them the means of whiling away many otherwise monotonous hours in the perusal of his clever stories, goes without saying. But when we speak of the load of indifference, ignorance, suspicion and malice regarding the regulars which has been cleared away from American homes through the instrumentality of his versatile pen, we may well congratulate ourselves that so accomplished a swordsman turned his knowledge of us to so successful and effective a literary account.

W. H. C.

In the JOURNAL of September 30th the article on the Siege of Chitral, by Lieutenant C. G. Stewart, R. A., should have been credited to the Journal of the Royal Artillery Institution.

JOURNAL OF THE ROYAL ARTILLERY INSTITUTION.

September, 1895: 1. Diary of Lieutenant W. Swobey, R. H. A., in the Peninsula (continued). 2. Eastern and Western Views of Mountain Artillery, by Major Simpson. 3. Notes on German Maneuvers, 1894, by Colonel Turner, R. A. 4. Siege of Gibraltar, by Brevet Lieutenant-Colonel Adye, R. A. 5. On Magazine Regulations (translation). The Field Gun of the Future, by Captain Bethell, R. A. October, 1895: 1. Diary of Lieutenant Swobey (continued). 2. Terrestrial Refraction and Mirage, by Lieutenant Brown. 3. The Artillery in Chitral, by Captain Herbert. 4. Considerations on Coast Defense, by Colonel O'Callaghan. 5. New Method of Setting the Tires of Wheels, by Major Owen. 6. The Ammunition Service of a Fort, by Major Johnson. November: 1. Diary of Lieutenant Swobey (continued). 2. Casualty Returns of the German Artillery; Battles of Colomley, Mars-la-Tour and Gravelotte, by Major Stone. 3. Adjusting Clinometer Planes of Ordnance, by Captain Donobue. 4. Employment of Artillery in Cuba, by Lieutenant-Colonel Dalton. 5. Extracts from Old Order Books R. A. Sheemus, by Captain Cummings.

UNITED SERVICE.

October: 1. The Regiment of Mounted Riflemen, by Lane. 2. Chronicles of Carter Barracks, by Closson. 3. The Maryland Line, by Adea. 4. The Japanese Embroglio. 5. Our Frontier Canals, by Harman. 6. Slaving Laborers and the Hired Soldier, by Steward. November, 1895: 1. If Attacked, Could the United States Carry On An Offensive War? by Hamilton. 2. The Occupation of Fort Sumpter and Hoisting the Old Flag April 14, 1865, by Jordan. 3. Railway Batteries and Armored Trains, by Boxall. 4. A Contribution to History, 1861–65, by Truman. 5. The English Officer, by Knollup. 6. The Ebb and Flow of the Tide, by Parr.

PENNSYLVANIA MAGAZINE OF HISTORY.

Benjamin Furly-Lachse.
 Washington After the Revolution, by Baker.
 In Lundy's Land, by Garrison.
 "Old Round Church," by Page.
 Defenses of Philadelphia, by Ford.
 Jour-

nal of A. A. Evans on Frigate "Constitution," by Evans. 7. Anthony Wayne, by Brooke. 8. A Philadelphia Merchant 1768-91, by Brown. 9. Indian Affairs in Eastern Pennsylvania 1756, by Schively.

JOURNAL OF THE MILITARY SERVICE INSTITUTION. November, 1895.

1. Can West Point be Made More Useful? by Birkhimer. 2. Extended Order, by Fornance. 3. Military Education for the Masses, by Kantz. 4. Artillery Organization, by Best. 5. Military Reservations, by Parke. 6. The Bicycle for Military Uses, by Whitney. 7. Ammunition Packing Boxes, by Remi. 8. The Equine Toilet, by Peary.

PROCEEDINGS OF THE UNITED STATES NAVAL INSTITUTE.

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THE MAINE BUGLE.

OUR DUMB ANIMALS.

1. Incidents in Virginia, etc., by Sergeant Fales. 2. With Sheridan in Lee's Last Campaign (continued), by Colonel Newhall. 3. A Pennsylvania War Incident, by Reo. 4 Stonewall Jackson, by Major Thaxter.

REVUE DU CERCLE MILITA	IRE.
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MILITAER WOCHENBLATT.	
THE RIDER AND DRIVER.	